

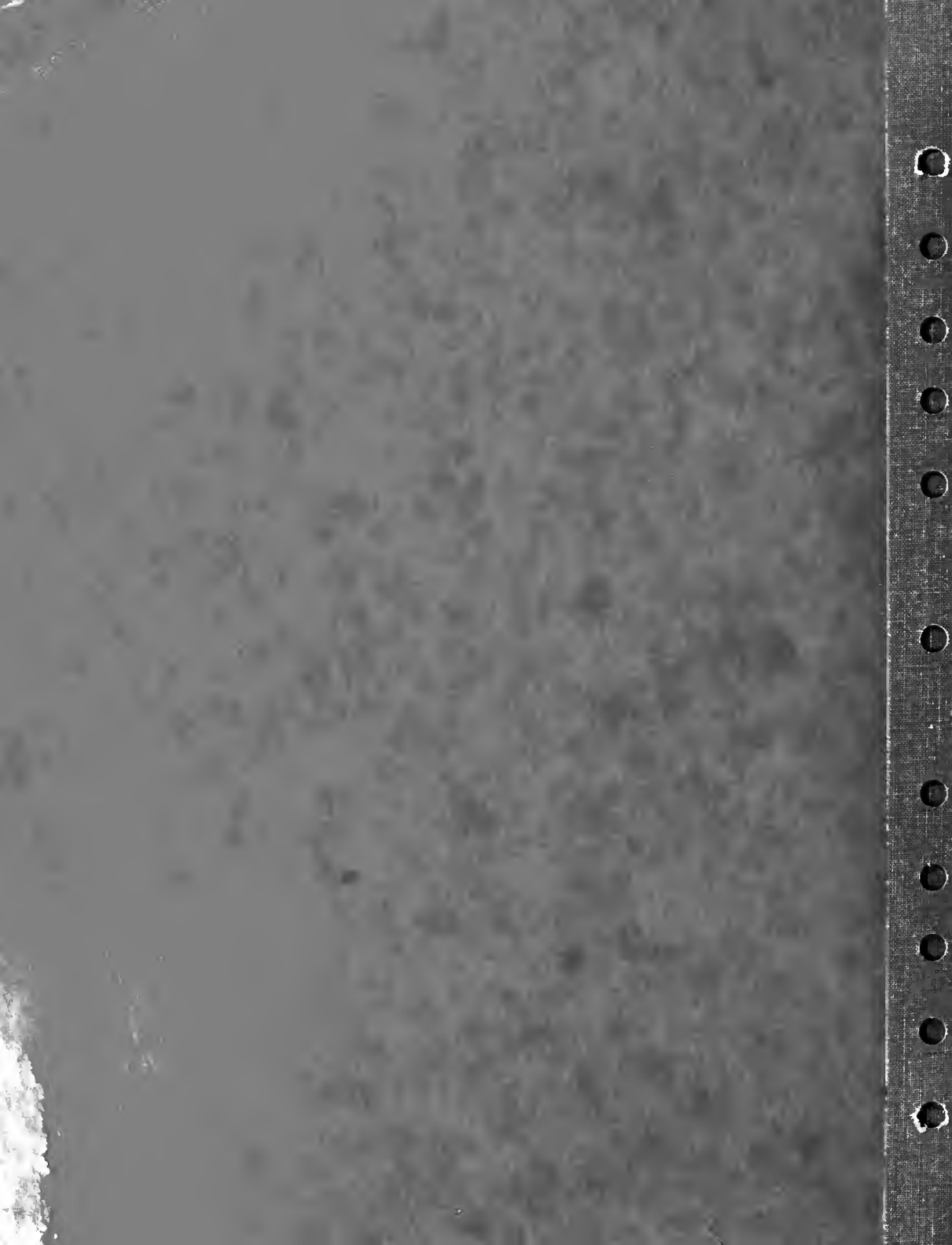
U.S., NATIONAL CANCER INSTITUTE

ANNUAL REPORT OF PROGRAM
ACTIVITIES.

July 1, 1976 through September 30, 1977

Part IV

DIVISION OF CANCER CONTROL AND REHABILITATION



U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

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ANNUAL REPORT

July 1, 1976 - September 30, 1977

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I.

DIRECTOR'S REPORT

July 1, 1976 - September 30, 1977



Section I

July 1, 1976 - September 30, 1977

DIRECTOR'S REPORT

NATIONAL CANCER INSTITUTE'S DIVISION OF CANCER CONTROL and REHABILITATION (DCCR)

The goal of this Division is to assist health professionals and the public in the widespread application of new and available knowledge, technologies, and methods to reduce the effects of cancer. These proven, new, and existing means to reduce the incidence and impact from cancer are applied through programs that span the interventions--from prevention, through detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care. The programs are accomplished through a series of projects with State and local health agencies, major medical centers, and NCI designated Comprehensive Cancer Centers. They also include major projects either directly with or indirectly involving teaching institutions, community hospitals, professional societies, other non-profit organizations, and Federal agencies. In transforming proven technology, these programs include activities that identify, field test, evaluate, demonstrate, and promote the use of this new knowledge and technology.

Field tests, evaluations, and demonstrations funded by DCCR are limited to settings that are representative of the health care system and public needs. They are generally targeted to higher risk populations. DCCR does not assume a service function and cannot assume long-term support of the technologies being demonstrated. Instead, it acts as the interface between research and health care. Field tests and demonstrations are typically funded for from three to five years and are to be continued through local support.

DCCR has grown from its origins in 1973 as a Program Office within the NCI Director's Office with a budgeted \$5 million to a Division managing over 300 distinct projects with a \$60 million budget in 1977. DCCR was formed in September 1974 with the responsibility for the Cancer Control Program and, in addition, was assigned the responsibility for the research thrust for cancer patient rehabilitation.

DCCR, through the cooperative efforts of its contractors, grantees, staff and management, has moved effectively toward its basic goal of affecting technology transfer. Highlights of these accomplishments are presented under three categories -- Intervention Programs, Community Activity Programs, and management actions.

Intervention Programs identify, field test, and evaluate new or improved cancer intervention techniques and methods and then demonstrate proven techniques and methods in various settings. Some specific accomplishments of these programs are:

- To apply successful research advances in the treatment of leukemia and lymphoma at the community level, some 2400 patients have been registered under the Prototype Clinical Chemotherapy Program in Cancer Control. These include over 680 adults with Hodgkin's disease, 1040 with non-Hodgkins lymphoma, and 430 children with acute lymphocytic leukemia. These projects, begun in FY 1973, have benefited patients by providing treatment in community hospitals under the guidance of oncologic experts from "primary" hospitals in the networks. DCCR funding has provided for seven networks linking some 70 community hospitals to "primary" hospitals specializing in cancer research and care. Certain of these projects have now been expanded to include other hematologic malignancies and to other childhood cancers. In conjunction with pediatric cancer control efforts under the Cancer Control Program for Clinical Cooperative Groups, these projects should reach most of the children with cancer not currently being treated in the Cooperative Groups, large children's hospitals, or the Comprehensive Cancer Centers.
- To implement practical control interventions for head and neck cancer, patient management guidelines have been developed and accepted by the seven Prototype Comprehensive Cancer Control Projects for Head and Neck Cancer. Networks link over 80 community hospitals to primary hospitals. The protocols deal with early detection, management of precancerous lesions, therapeutic measures to reduce disability and disfigurement, early application of rehabilitative measures, and continuing care for those who cannot now be cured.
- To increase the involvement of community health professionals, 12 Prototype Network Demonstration Projects for Breast Cancer have developed and used patient management guidelines. These comprehensive guidelines cover detection, diagnosis, pretreatment evaluation, treatment, rehabilitation and continuing care. They were developed through the cooperative efforts of network hospitals -- their project staff, tumor boards, and specialists in diagnosis, treatment and rehabilitation. More than 145 hospitals and 4000 breast cancer patients have been involved in the demonstration. When combined with active outreach to physicians and the public, each project has influenced patient care throughout a major population area -- state, large rural, or metropolitan area.
- To test the concepts of community cancer centers, seven community cancer control treatment projects have been established under the Clinical Oncology Program. Each consists of a single,

or two or three cooperating hospitals without University or major cancer center affiliation. In each community, surgeons, radiotherapists, and chemotherapists have worked in close cooperation with practitioners that provide care for cancer patients to create staging and treatment guidelines suitable for use within the community. This program, fostering multi-disciplinary care in the local setting, is intended as an alternative that can overcome some of the patient/family/socio-economic problems and fragmentation of care that can result from referral to a distant major center. These seven projects have also developed coordinated cancer rehabilitation, continuing care, and educational programs making use of all available community resources.

- To utilize their vast therapeutic experience in cancer control, some 42 clinical trial groups within the five newly established Cancer Control Programs in Clinical Cooperative Study Groups have developed networks comprising 207 affiliate community hospitals. This program provides education, oncological consultations, and data management services to help physicians and hospitals at a local level to effectively implement well-defined, proven cancer treatment protocols.
- To study community practice in dealing with colorectal cancer, DCCR issued a grant to a consortium of ten community hospitals and the Michigan State University. This Community Based Study of Colorectal Cancer Control has developed standardized protocols to study diagnosis and treatment of colorectal cancer patients in central Michigan. The goal of this study is to improve cancer control methods by determining the susceptibility of persons to demographic and nutritional factors, false negatives and false positives at diagnosis, problems in referral patterns and treatment decisions, and other socioeconomic problems. Some 363 colorectal patients have been interviewed in the study area that includes 20 counties and 2.6 million persons.
- To improve the availability, practice and accessibility of quality radiation therapy, some 8000 hospitals and clinics were involved in a survey conducted under the Patterns of Care Study during the past year. Some 168 representative radiotherapy services were analyzed, and decision tree/flow diagrams were developed for five cancer sites. The goal is to determine existing care patterns and means to improve decisions and therapy standards by influencing educational and geographical factors. Continuation funds will allow for expansion to five additional cancer sites, an analysis of outcomes related to variations in care, a study of utilization and referral patterns, and implementation of pilot educational programs.

- To upgrade education in cancer diagnosis, planning for regional training conferences has been completed under the Planning for Oncologic Diagnostic Radiology Conferences Project. The conduct of these workshops is planned for FY 1978. They are planned to involve: malignancy of the gastro-intestinal tract (hollow viscera); brain tumor imaging; Hodgkin's disease, lymphoma, leukemia; cancer of the liver, biliary tract, pancreas, spleen, kidney, ureter, bladder, prostate, urethra, penis and testes; and to emphasize high quality detection and diagnosis using angiography, contrast media, sonography, nuclear medicine, and computerization.
- To involve family physicians in cancer control, some 2000 physicians have been involved in reporting their cancer cases in the program for an Organized Approach by the Family Physician to the Diagnosis and Management of Selected Forms of Cancer that was initiated in the past year. This program is targeted at improving cancer diagnosis, treatment, and reporting by the 60,000 family physicians in the U.S. through guidelines for early detection and diagnosis, treatment management, and an organized reporting analysis and followup system to assist the family practitioner in cancer patient management.
- To recruit and train needed nursing capabilities in cancer, more than 3800 nursing personnel representing over 150 hospitals have attended courses conducted under the Oncology Nursing Training Program. These courses focus on improving knowledge and skills needed for management of the cancer patient. Topics included are cancer etiology, epidemiological patterns, public attitudes, diagnostic techniques, treatment modalities and rehabilitative and supportive care for patients and their families.
- To direct cervical cancer screening to high risk women, State and Territorial Cervical Screening Demonstration Programs, involving 35 State and territorial health departments, have given over 750,000 Pap tests to some 544,000 women. Over 2270 biopsies have been performed with 1613 being reported out as abnormal. Some 777 cancers have been reported. Individual case data are being submitted with evaluation of cost effectiveness and cost benefit of the program. Seventy-one percent of the women screened were in poverty and low income groups; 37% in the high risk ethnic groups, which make up only 11% of the U.S. population; and 45% from rural settings.
- To field test diagnostic and pretreatment evaluation of female genital cancer, a series of studies was made of The Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed in utero to Synthetic Estrogens. These projects are providing medical followup and information about

vaginal epithelial changes in female offspring exposed to diethylstilbesterol (DES) in utero. In addition, the development of a monograph on DES was initiated. This document will contain information about physical and chemical properties, human exposure data, biological properties, epidemiological and toxicological data, and a control prospectus relating to DES exposure and medical followup.

- To improve the nation's approach to Breast Cancer screening, a comprehensive plan was established for improving the Breast Cancer Detection Demonstration Project (BCDDP) and improving on the scientific knowledge available to address the questions surrounding breast cancer screening. After transferring the scientific and management responsibilities for the BCDDP to DCCR in July 1976, a concerted effort was placed on improving operations. Coordination of operations and medical interventions was enhanced through a Coordination Working Group comprised of four project directors, three project coordinators, Data Management Center staff, and DCCR staff. All forms and medical and administrative procedures were reviewed, and a comprehensive Operations/Procedure Manual was issued and made a part of the contracts. Data reporting and processing was greatly improved. Guidelines were issued in August 1976 and modified in May 1977 to reflect recommendations and knowledge gained through reports by the ad hoc groups (Drs. Breslow, Thomas, and Upton). A Working Group for the Review of the BCDDP was established to obtain the scientific information possible from the BCDDP when considering the fact that the BCDDP was set up, and has functioned, as a demonstration project rather than a study and/or clinical trial. An NIH consensus meeting has been set up for early September 1977 to 1) consolidate the findings from the BCDDP where a greatly improved mammography technology has been used when considering the technology used in previous controlled studies; and 2) address the efficacy of breast cancer screening.

This project has screened some 270,000 women in the first of five annual screenings. As of March 1977, approximately 215,000 of these have been screened in the second annual screening. For screening recommendations made prior to July 1977 and on a screening cohort of 262,000 women, some 1656 cancers have been detected. Preliminary information, if confirmed by the pathology review of the Working Group for the Review of the BCDDP and BCDDP Pathology Quality Control Project, may show that the BCDDP has detected a larger percentage of small, 1 cm diameter or less, infiltrating cancers than did previous studies. The total cancers reported from the BCDDP cohort is 2003 when including interval cancers--those for which a recommendation for biopsy was made outside of the BCDDP.

- To improve the radiologic conditions used to monitor equipment for mammography, six Centers for Radiological Physics continued their review of mammography as used in the Breast Cancer Detection Demonstration Project. Mid-breast exposure for the two views used in BCDDP screening has been reduced to an average approximating 1 rad per examination. Weekly measurements placing a detector on the breasts of five randomly selected women, plus (in alternate weeks) an exposure of a phantom to check calibration for the center's equipment and standard, provides the Physics Centers with a data to analyze each screening project's continuous performance.

Through an interagency agreement funded by DCCR to the Bureau of Radiological Health (BRH), the techniques developed in the Centers for Radiologic Physics program have been transferred to BRH. BRH has helped five States implement mammography monitoring programs and 17 more State-managed implementations are expected this coming year.

- To assess the cancer control needs in chemical carcinogenesis, some 147 chemicals have been reviewed for the possibility of being human carcinogens. Dossiers have been prepared for each of these and 20 chemicals were identified as meeting the human carcinogen criteria set by an expert committee. Reports were developed for these 20 chemicals that provided information on physical and chemical properties, human exposure data, biological properties, epidemiological and toxicological data and a control prospectus. Three were selected for developing more comprehensive monographs and a monography for vinyl chloride has been completed.
- To aid in worker education in environmental carcinogenesis, a materials development and worker education program is being developed under an interagency agreement with the Occupational Safety and Health Administration. A symposium was held in late 1976 that identified the best information available on occupational cancer education. Educational materials for five worker-groups are being developed. In addition, the development of a cancer alert film has been initiated. Training sessions using the materials for the five worker-groups will be initiated in September 1977.
- To develop prototype surveillance programs in cancer control for persons exposed to chemical carcinogens, two surveillance and medical followup programs have been funded. Over 850 of the 1350 employees of the vinyl chloride plant in Louisville, Kentucky have been examined in the followup program. During the past year education programs have been implemented for all workers, their families, and the former workers and their families. In the surveillance and medical followup program for asbestos workers, some 683 of the 1040 persons who worked

either full or part time in the Tyler, Texas plant have been examined at least once in the program. The remaining workers associated with this closed plant have either died or refused to participate, or have been lost to followup. Because 87 percent of the cohort are smokers, and smoking combined with exposure to asbestos significantly increases the risk to cancer, a smoking cessation program was implemented in the past year. It is expected to play an important role in preventing cancer in the worker cohort and their families.

- To deal with cancer prevention, a school-based smoking prevention program directed toward children (grades 5-9) and a program for training teachers was implemented in New York City. A preliminary field test was conducted in December 1976, and two schools have been selected and coordinated for conducting a control and test group assessment of an approach in smoking prevention called "Know Your Body." This type of program includes a smoking withdrawal program component as a major emphasis, and includes information on the interaction between smoking and environmental or occupational situations.
- To field test the Hospice concept in the United States, some 360 patient-family units have received "full service" support from the home service component of the greater New Haven Hospice in the past three years. This demonstration of the home service and in-patient hospice concept emphasizes symptom management and host maintenance for cancer patients not responding to treatment. In addition, a full range of services for the patient-family unit is provided which includes support through appropriate activities, companionship, social services support, medical support and spiritual counseling in an environment which openly accepts and copes with various needs of patients and families on a 24-hour basis and without acute over-reactions. To obtain an assessment of impact of the hospice concept in various areas of the United States, three additional demonstrations of England's hospice concept are planned. One is expected to be funded in FY 1977.
- To promote cancer rehabilitation, some 8000 professionals have been instructed on how to plan and apply various rehabilitation services through the operational projects for the Demonstration of Cancer Rehabilitation Facilities and/or Departments. Six of the ten projects in this area have completed their performance period. These are being analyzed for commonality of components, functioning of involved components, and the development of rehabilitation protocols and implementation approaches that can be applied in various types of medical institutions including major medical centers and teaching institutions and community hospitals. Each contractor is now providing functional descriptions and evaluation of impact which is contributing heavily to the analysis. In addition, in order to provide a full spectrum of rehabilitation resources to cancer patients on an at-home basis, some 500 patients

have been involved in the three projects for the Development and Implementation of At-Home Rehabilitation Program. These projects identify physical, psychological, vocational, nutritional and continuing care needs of discharged oncology patients, and train and coordinate rehabilitation teams, community resources, patients and families. The process and impact will then be evaluated to achieve program designs for future implementations.

- To increase the basic knowledge on the unique aspects of rehabilitation needs of patients with various cancers and to conduct research studies on newer approaches to providing medical and psychosocial interventions and other supportive services in the course of rehabilitation, DCCR has increased its support in investigator initiated grants for rehabilitation research. Some 28 grants are now supported in this area covering studies of: psychosocial aspects of rehabilitation for patients involving most cancer sites; unique aspects of rehabilitation of childhood cancer patients; rehabilitation in the rural setting; and interventions to deal with impairments and dysfunctions.

Community Activity Programs test approaches to the Cancer Control Program's "intervention implementation strategy" through centers-outreach and community-based programs. They emphasize a coordinated approach for implementing multiple interventions covering more than a single cancer site. Key accomplishments in these programs include:

- To utilize the cancer research talent of Comprehensive Cancer Centers, some 15 Cancer Centers have received Centers Outreach Developmental Grants. These grants basically provide for the core staff to develop and administer public and professional outreach programs and funds for supportive activities such as for planning and for epidemiological statistical support needed to assess the needs of their communities. In addition, support is provided for implementing innovative projects in Cancer Control that are shown to be important to their specific programs and the involved communities. Through these grants, centers have developed a wide variety of Cancer Control activities for community physicians, such as: model oncology training programs, dosimetry programs, multidisciplinary/multi-institutional consultative services for diagnosis and treatment, paraprofessional training programs, pathology services, tumor registry education, and training of nurses in detection.
- To provide the public with the latest information on cancer from the developers of the knowledge, the Cancer Information System (CIS) has become operational. Since February 1976, when the first CIS was inaugurated in the Fort Myers, Florida area, the CIS has grown to include 16 NCI Designated Comprehensive Cancer Centers and has responded to approximately 60,000 inquiries from the public and health professionals. The CIS is now available to an estimated 105 million Americans in 22 States.

- To test the hypothesis that coordinated interventions in communities with population based incidence systems can reduce incidence, morbidity and mortality, six Community-Based Cancer Control Programs (CBCCP) have been selected for implementation. Two of these CBCCPs were funded for direct implementation in FY 1976. Four were moved into their implementation phase during FY 1977. By the end of FY 1977, implemented CBCCPs will exist for: 1) Metropolitan Detroit, Michigan; 2) State of New Mexico; 3) Suffolk and Nassau Counties on Long Island, New York; 4) State of Hawaii; 5) selected areas of Metropolitan Los Angeles, California; and 6) the State of Rhode Island. One additional CBCCP remains in the planning phase at this time. Cancer sites covered by interventions in these programs include breast, colon-rectum, lung, uterine-cervix, head and neck, and prostate. Through a variety of local organizations and institutions, the CBCCPs hope to influence cancer prevention and care for populations ranging from 800,000 to 4,200,000 persons in each of the areas covered by these programs. If all seven are moved to implementation, this would bring the population base to an estimated 17 million persons.

Divisional Programmatic and Organizational accomplishments that are directed toward improving the quality and responsiveness of the Cancer Control Program are:

- To obtain a proper balance between grants and contract funding, DCCR increased its FY 1977 funding of grants to a projected \$16.9 million, a sizeable increase over last year's \$11.4 million. This exceeded the Cancer Control and Rehabilitation Advisory Committee's (CCRAC) recommendation for balance in grant funding versus contracts but was considered proper in light of the fact that DCCR needs to continuously upgrade its approaches with innovative techniques and better approaches, both of which are generally offered by investigator-initiated grants. Research on the basic sciences and/or medical interventions and/or knowledge is provided by other NCI research divisions and the general research community with DCCR developing practical approaches.
- To improve DCCR's response to planning and reporting requirements and to provide continuous epidemiological, biostatistical, evaluation, data collection designs, and data analysis support to project officers involved in field tests and demonstration programs, an Office of Planning and Analysis (OPA) was established during FY 1977. OPA will assume some of the responsibilities of the dissolved Supportive Services Branch in terms of management of projects that were contracted for fulfilling the general needs of the CCP. OPA will share responsibilities with the planning function in the Office of the Director, NCI, in developing routine reporting and planning documents. Most valuable to DCCR, OPA will augment the analytic support to new and ongoing programs previously provided on a part time, consultative basis from the Division of Cancer Cause and Prevention's Field Studies and Statistics.

- To handle the dynamics of a maturing Cancer Control Program (CCP) where knowledge from research is also dynamic and where funds for new projects become increasingly less, DCCR staff prepared a detailed planning document for review by the Cancer Control and Rehabilitation Advisory Committee. This working document displayed projects in terms of priorities, program content, and each program's involvement in specific interventions and cancer sites. From this comprehensive review of ongoing and planned projects, DCCR will finalize CCP plans in terms of specific programs, priorities for programmatic thrusts, and overall programmatic policy to reflect past achievements, current needs, and current status of cancer research. This activity and state-of-the-art workshops, such as those conducted for thyroid, cervical, and endometrial cancers, when combined with subcommittees' investigations will fulfill our previously planned FY 1977 objective to review and update the CCP and its technologies.
- To improve on both the assessment of the efficacy of new and current interventions and knowledge and improve on how the interventions and/or knowledge is applied, DCCR continued and expanded its Merit Review Activities. Some 68 contracts were reviewed by peer groups of non-NCI scientists and clinicians to improve ongoing performance and assure the current knowledge is being used. Also, during FY 1977 special subcommittees of the Cancer Control and Rehabilitation Advisory Committee investigated current technologies for improving the Cancer Control Program.
- To assure that existing and new methods, techniques, and knowledge are ready for application through the CCP, a major thrust in assessing both newer interventions in screening and care and multiple interventions for a specific cancer was initiated in FY 1976. Three state-of-the-art workshops were held in FY 1976 and FY 1977. The initial workshops included: Irradiation-Related Thyroid Cancer; Screening for Cervical Cancer; and Estrogens and Endometrial Cancer. A consensus development meeting on breast cancer screening will be held in September, 1977. Other state-of-the-art workshops that are planned for late 1977 include such subjects as: Cancer Screening for Gastrointestinal Cancer; Preventive Medicine and Cancer Control Screening for Bladder Cancer; Screening, Diagnosis and Treatment of Prostate Cancer; and Smoking and Health. These workshops and the consensus development meeting bring together leading scientists and clinicians for a consideration of all available scientific information and clinical observations and of the needs for intervention. They also provide a current assessment of the readiness of techniques for transfer into application in terms of efficacy, involved risks, cost/benefits, practicality, constraints and target (high risk) populations.

Public and Professional Outreach Activities
of DCCR Staff, Contractors and Grantees

Although DCCR is not large in number of staff persons, its activities in program management and outreach are quite extensive. Staff members, in addition to playing an active role in the management and evaluation of the more than 300 DCCR projects, have participated in site visits to community hospitals, universities, and Comprehensive Cancer Centers and have made formal presentations throughout the country to medical and health professionals as well as to many paramedical and voluntary organizations. In addition to the outreach activities of DCCR staff, almost all DCCR contracts and grants have similar outreach activities and other tasks that involve the transfer of new and available information to both the public and professionals. In some projects this is accomplished through leaders in oncology demonstrating newer interventions to other health professionals and the actual involvement of the public as screenees, patients, and volunteers to the projects. Most DCCR projects such as demonstrations of rehabilitation and continuing care methods, treatment programs, and screening programs have substantial outreach requirements built into each project. Some project areas, such as the Community-Based Program, Centers Outreach Grants, and Cancer Communication Services contracts have even higher requirements for professionals outreach and public education.

A review of these information transfer processes that occurred by the end of FY 1977 through contractor and grantee activities shows that 1700 to 1800 community hospitals have been directly or indirectly involved in cancer control as a result of DCCR projects. This is over 42 percent of the 4000 community hospitals with 50 beds or more in the United States. The total Cancer Control Program has been established to influence the cancer care in target areas containing some 60 million people with information outreach available to an estimated 100 million persons in the United States.

In looking at how this occurred, Comprehensive Cancer Centers have, when including the activities made possible through DCCR's Outreach Developmental Grants, either interacted with or influenced conduct of cancer care in an estimated 1000 community hospitals. DCCR's Clinical Oncology Program; Cancer Control in Clinical Cooperative Groups; various Treatment Grants; Head and Neck Network Demonstration Program; Breast Cancer Network Demonstration Program, and Clinical Chemotherapy (leukemia and lymphoma) Network Demonstration Programs have involved some 590 community hospitals. The screening programs in the Cancer Control Program have involved some 84 additional community hospitals and over 800,000 persons who have received screening and cancer education. Projects to improve rehabilitation and continuing care interventions in the community setting through demonstrations and training programs have involved some 50 - 60 additional community hospitals as well as many other major centers that are hospitals experienced in cancer.

These estimates of involvement do not include those hospitals for which representatives from their staff attended one-of-a-kind project-sponsored activities such as workshops, training sessions, tumor board meetings, visitations, etc., in intervention programs where a routine communications was not

being established for that particular event or activity. They do include the situations where a long range interaction is involved and/or where the training sessions were substantial in time required, and/or offered on a continuing basis. The occasional, one-of-a-kind interactions resulted in several thousand more professionals being influenced by the Cancer Control Program contractors and grantees. In total, it is estimated that over 30,000 professionals have been involved at some point in the Cancer Control Program to date.

During FY 1977 DCCR staff has been involved in some 20 publications disseminated as NCI materials, journal publications, and one book co-authored by a DCCR staff member. As an indication of personal contributions and the staff's commitment to public service, several honors were also received. To further outreach to professionals and the public, nine conferences were either sponsored or assisted in management by DCCR; staff participated as faculty and/or speakers in over 50 meetings, symposia, and workshops. Continuing liaison was maintained with some 17 associations and societies and with several Federal agencies in matters that relate to the Cancer Control Program. A listing of these activities is provided.

- DCCR Staff Honors

Dr. Diane J. Fink, Director, DCCR, was elected to Who's Who in America, and to Who's Who in Health Care.

Dr. Diane J. Fink was nominated and accepted to serve for five years as a member of the World Health Organization's Expert Advisory Panel on Cancer.

Dr. Diane J. Fink served as Chairman, U. S. Delegation on US-USSR Exchange on Cancer Control/Cancer Centers, Leningrad and Moscow, USSR.

Dr. James Hamner, Associate Director for Intervention Programs, was honored with a U.S. Public Health Service Commendation Medal for his outstanding direction of the Intervention Programs section, Division of Cancer Control and Rehabilitation, NCI. Dr. Hamner received his award in June, 1976.

Ms. Adele Nusbaum was elected vice-chairperson of the Public Relations Society of America, Health Section Executive Committee.

Ms. Linda Bremerman was elected DCCR representative and Secretary to the National Cancer Institute Equal Employment Opportunity (EEO) Advisory Committee.

The President proclaimed April as Cancer Control Month.

• DCCR Publications

DES Exposure in Utero--Information for Physicians. U.S. DHEW, PHS, NIH, NCI, DHEW Publ. No. (NIH) 76-1119. Bethesda, Maryland. Professional and Public Relations Committee of the DESAD Project (Diethylstilbestrol and Adenosis) of DCCR, NCI and the Office of Cancer Communications, NCI.

Questions and Answers About DES Exposure Before Birth. U.S. DHEW, PHS, NIH, NCI, DHEW Publ. No. (NIH) 76-1118. Professional and Public Relations Committee of the DESAD Project (Diethylstilbestrol and Adenosis) of DCCR, NCI and the Office of Cancer Communications, NCI.

Were YOU or YOUR DAUGHTER Born After 1940? U.S. DHEW, PHS, NIH, NCI, DHEW Publ. No. (NIH) 77-1226. Office of Cancer Communications, NCI.

National Cancer Program Special Communication Exposure In Utero to DES. Office of Cancer Communications, NCI, September 17, 1976.

National Cancer Program Special Communication, Irradiation-Related Thyroid Cancer. Office of Cancer Communications, NCI, August 20, 1976.

Irradiation-Related Thyroid Cancer -- Information for Physicians. U.S. DHEW, PHS, NIH, NCI, DHEW Publ. No. (NIH) 77-1120. Division of Cancer Control and Rehabilitation, NCI.

Did YOU as a child or a young adult have X-RAY TREATMENTS involving your HEAD or NECK? U.S. DHEW, PHS, NIH, NCI, DHEW Publ. No. (NIH) 77-1206.

Cancer Education Materials for Medical Professionals -- A Catalog. U.S. DHEW, PHS, NIH, NCI. In press. Koba Associates, Inc. and DCCR. 1977.

Adult Use of Tobacco - 1975. Joint report issued by the Center for Disease Control, Bureau of Health Education and the Prevention Branch, Division of Cancer Control and Rehabilitation, NCI. U.S. DHEW, PHS, NIH, NCI, CDC. Contract CDC 21-74-520. June, 1976.

Buell, Donald N., M.D., (co-author) Viral reverse transcriptase suppression associated with erythroid differentiation of Friend leukemia cells. Journal of the National Cancer Institute, March, 1977.

Buell, Donald N., M.D., (co-author) Principles of Therapy in Childhood Cancer. Journal of School Health, March, 1977.

Elaimy, Wadie, Dr. P.H., 1975 Hospital Discharge Study--A Monograph. Health Systems Management Corporation, Oakland, California, 1977.

Fink, Diane J., M.D., Cancer and Cancer Research. 1976
Britannica Book of the Year, Encyclopedia Britannica, 1976.

Fink, Diane J., M.D., Symposium: The Illusion of Immortality.
Preventive Medicine, 5:478-480, 1976.

Green, S.B., Myers, M.H., and Fink, D.J.: "A Population Based Study of Referral, Diagnostic and Treatment Patterns for Childhood Acute Lymphocytic Leukemia." (To be published in American Journal of Epidemiology.)

Malone, Winfred F., Ph.D., Present Program of the National Cancer Institute in Screening for Breast Cancer -- Some Preliminary Data on Screening and Monitoring, Journal of the Society of Instrumentation Engineers, Washington, D. C., 1977.

Malone, Winfred F., Ph.D., Prevention of Disease and Disability, Health Concerns Task Force, White House Conference on Handicapped Individuals, Washington, D. C., May, 1977.

Mehta, Fali S., B.D.S., D.M.D.; Hamner, James E. III, D.D.S., M.S., Ph.D.; Pindborg, Jen J., D.D.S., Dr. O.dont., The Natural History of Oral Leukoplakia, 1977.

Mehta, Fali S., B.D.S., D.M.D.; Hamner, James E. III, D.D.S., M.S., Ph.D.; Pindborg, Jen J., D.D.S., Dr. O.dont., The Natural History of Oral Leukoplakia, Proceedings of the Third International Symposium on Detection and Prevention of Cancer, Mount Sinai School of Medicine, New York City, 1976.

● Conferences Sponsored or Assisted by DCCR

US-USSR Exchange on Cancer Control and Cancer Centers

ACS/NCI National Conference on Cancer Research and Clinical Investigation

Origins of Human Cancer Symposium

Symposium on the Physics of Mammography--Midwest Center for Radiological Physics

Medical Surveillance in an Industrial Setting--A Working Model

Cancer Information Service Project Officers' Meetings

Evaluation Meeting--Community-Based Cancer Control Program Contractors

30th Congress and Festival of the International Scientific Film Association (Visual Media in Cancer Control)

DCCR State-of-the-Art Conferences: Thyroid Cancer
Cervical Cancer
Estrogens & Endometrial Cancer

Symposium on Public Information in Prevention of Occupational
Cancer

• Events with DCCR Program Staff Participation

CDC/NCI Adult Tobacco Use Study Briefing

Cancer Information Service Project Officers' Meetings

Community-Based Cancer Control Program Meetings

National Cancer Advisory Board Site Visits

30th Congress & Festival of the International Scientific Film
Association (Visual Media in Cancer Control)

State-of-the-Art Meeting in Thyroid Cancer

State-of-the-Art Meeting in Cervical Cancer

State-of-the-Art Meeting in Estrogens & Endometrial Cancer

ACS/NCI Fourth National Cancer Communications Conference

International Conference on the Adjuvant Therapy of Cancer

Federal Regional Council Meeting (Region II--DHEW, NYC)

Medical Research Advisory Committee, BRH, FDA

Symposium on the Physics of Mammography--Midwest Center for
Radiological Physics

Federation of American Hospitals Meeting on "Health Economics"

Symposium--Advances in Cancer Treatment Research (Johns Hopkins
University)

American Association of University Women (Laurel, Maryland Branch)--
Health Awareness Seminars for Women

Medical Radiation Oncology Committee--Bureau of Radiological
Health, FDA

Step Module Series--NIH Continuing Education Program

Medical Surveillance in an Industrial Setting--A Working Model
(University of Louisville Vinyl Chloride Program/NCI)

Annual Meetings: American Society for Clinical Oncology
American Association for Cancer Research
(Denver, Colorado)

Evaluation Meetings for Community-Based Cancer Control Program

National Cancer Program Information Clearinghouse

DCCR Brown Bag Seminars

NCI EEO Advisory Committee

Breast Cancer Detection Demonstration Project Working Group
Meetings

Origins of Human Cancer Symposium

Inaugural Ceremonies--Cancer Information Service of Metropolitan
Washington/Howard University Comprehensive Cancer Center

Washington State Cancer Education Conference

Health Education Cancer Workshop for Boise Independent School
District and the Meridian, Kuna, and Weiser School Districts

School Health Workshop at Plattsburg--New York University at
Plattsburg

Cancer Control and Rehabilitation Advisory Committee

Cancer Control and Rehabilitation Reimbursement Subcommittee

Cancer Control and Rehabilitation Prevention Subcommittee

Cancer Control and Rehabilitation Community Activities Sub-
committee

Intervention Programs Review Committee

Cancer Control Grants Review Committee

Committee on Radiation Oncology Studies

Diagnosis on Research Advisory Committee

National Bladder Cancer Project

Annual Conference of Radiation Control Program Directors, BRH

National Cancer Advisory Board

White House Conference on Handicapped Individuals

Comprehensive Cancer Centers Directors' Meeting

Cancer Control Program, Directors of Comprehensive Cancer Centers Meetings

Biological Effects of Ionizing Radiation Committee (BEIR)
National Academy of Sciences

NCI Breast Cancer Task Force

Association of American Cancer Institutes

Association of Comprehensive Cancer Centers

Contractors' Meeting for Cervical Cancer Screening Program

Radiology Society of North America Meeting

NCI Interagency Collaborative Group on Carcinogenesis

American College of Surgeons Meeting

National Large Bowel Cancer Project/National Prostate Cancer Project

• Partial Listing of DCCR Liaison Contacts with Health Organizations During FY 1977

American Cancer Society

American Society for Clinical Oncology

American Association for Cancer Research

American Public Health Association

American Association of Physicists in Medicine

American College of Radiology

Association of Community Cancer Centers

American Nursing Society

Candlelighters

National Cancer Foundation (Cancer Care)

American College of Surgeons

American Thyroid Association

American Association for Cancer Education

American Society for Preventive Oncology

American Society of Head and Neck Surgeons

BEIR (Biological Effects of Ionizing Radiation) Committee
National Academy of Sciences

Medical Research Advisory Committee, Bureau of Radiological
Health, FDA

Program Scope and Strategies

The following provides a brief overview of the scope and strategies used in the implementation of the Cancer Control Program.

Legislative Authorization

Section 409.(a) of the National Cancer Act of 1971, as amended in 1974, states: "The Director of the National Cancer Institute shall establish programs as necessary for cooperation with State and other health agencies in the diagnosis, prevention, and treatment of cancer..." Funding authorization for the Cancer Control Program was set forth as a line item in the allocations.

Program Planning and Implementation Strategies

- Program Intervention Strategy

The Program Intervention Strategy is defined in terms of three major intervention areas: 1) Prevention, 2) Detection, Diagnosis, and Pre-treatment Evaluation, and 3) Treatment, Rehabilitation, and Continuing Care. These three intervention areas were defined for the Cancer Control Program in terms of eight major program objectives and detailed approaches for implementing these objectives. These were defined through a planning conference in 1973 comprised of leading scientists and clinicians from inside and outside of NCI.

These approaches are applied by interventions for the most common cancers or cancer sites. Certain of the higher incidence cancer sites were selected for CCP emphases. These include lung, prostate, colon and rectum, urinary tract, leukemia and lymphoma, head and neck, female

genitals and digestive organs. Further, the focus of the CCP's approach and activities is primarily targeted toward the subpopulations at higher risk to specific cancers.

This approach of dealing with the cancer problem parallels the "traditional" research approach of developing a beneficial intervention for a specific cancer. To increase the visibility of, and assurance that, each major intervention area is programmatically addressed to the extent possible with available knowledge, DCCR has structured its organization to include a Prevention Branch, a Detection, Diagnosis and Pretreatment Evaluation Branch, and a Treatment, Rehabilitation and Continuing Care Branch under an Associate Director for Intervention Programs.

- **Intervention Identification and Development Strategy**

The Intervention Development Strategy defines an orderly sequence and defined activities for translating all relevant research knowledge into use. It includes the activities of identification, field testing, evaluation, demonstration, and promotion. For each intervention area objective in the Program Intervention Strategy, one, several, or all of these five basic operations are carried out, depending on the particular disease site and the state-of-the-art of the knowledge and technology applicable to the disease site. In each intervention area, all available knowledge and technology are continuously examined for control applicability by disease site. DCCR and NCI staff, as well as our operating advisory committees and other involved scientists and clinicians, contribute to this ongoing assessment. The Intervention Program area of DCCR is basically responsible for this part of the CCP strategy.

Those specific intervention techniques or methods identified as having potential for cancer control are field tested in limited community settings and evaluated for impact, acceptability and practicability. Those activities proven in the evaluation process by either the CCP or other cancer programs are then put into demonstration projects to show the effectiveness of verified clinical techniques or procedures in various settings and in specific regions for population groups at high risk. The results of the demonstrations are promoted to the health professions and the public through efficient use of the established means of communication, such as journals, reports, seminars, workshops, mass media, etc. This part of the development process is carried out in both the Intervention Program and the Community Activities areas of DCCR, with the Intervention Program area developing interventions for a specific cancer site and Community Activities area is developing methods to effect cancer prevention and care across large communities and for a group of interventions and cancer sites.

- **Intervention Implementation Strategy**

The third strategy, the Intervention Implementation Strategy, is directed toward determining how the Intervention Developmental Strategy can best be implemented. This strategy involves the relationship of the newer technique or method to outcomes of related research thrusts, to existing methods being practiced, and to the setting in which the control

activities should best be proven and applied.

There is no single, well-established, and universally accepted approach for carrying out the Congressional mandate for cancer control activities. This fact was recognized by the Congress in its committee report on the National Cancer Act of 1971, where it stated:

"Yet the Committee sees an important role for NCI in the bridging of the gap between research and general medical application. Once the effectiveness of these findings can be demonstrated--to the satisfaction of the scientific community--these results or techniques should be expeditiously communicated to the medical practitioner. The NCI should develop an aggressive and coordinated program to demonstrate the application of recent research discoveries as rapidly as possible, using whatever community resources are available, and communicate these findings to practitioners where these findings can be applied.

For the cancer control effort, the Committee urges that all appropriate resources be utilized. However, the Committee does not necessarily intend that past approaches be the only approaches to the problem. The National Cancer Institute should closely study the use of cancer research centers for it is here that many impressive research findings are being and will be uncovered. It is also here that the effectiveness of these findings can be proved."

Based on this statement, the Cancer Control implementation strategy involves the use of basically three concurrent approaches.

The first might be termed the "traditional" approach in that it is the approach which parallels research methodology and has been used in earlier cancer control programs. This approach focuses on single intervention activities directed at a specific site and is implemented in a nonintegrated, single-thrust manner. As stated prior, this approach is basic to the activities which are carried out by DCCR's Intervention Program.

The second approach might be called the Center Outreach approach because it is predicated on the use of experienced cancer centers, as the highly capable focal points for reaching out and responding to a community's needs for cancer control education, consultation, and assistance in applying specialized interventions. This approach is aimed at utilizing the best resources and the most current knowledge available at these research centers. Their functions in the control activities are being carried out both through the use of (developmental) outreach grants and through the competitive funding of a variety of stage one activities located at those centers which meet peer review requirements. The program relating to this implementation approach is administered by DCCR's Community Special Projects Branch under the Associate Director for Community Activities.

The third approach might be termed the Community-Based approach because it focuses on the combined cooperative efforts of a community to carry out demonstrations of control activities for multiple intervention areas that address a limited number of cancer sites. This approach is targeted at the use of proven interventions and at maximizing the application of existing resources in the community-level setting where care to over 75 percent of cancer patients occurs. This program implementation approach is administered by DCCR's Community Resources Development Branch under the Associate Director for Community Activities.

Projects not specific to branches in either the Intervention Program Section or the Community Activities Section of DCCR are administered with the Division Director's immediate office or the Office for Planning and Analysis.

Cancer Control Program Constraints

Cancer Control does not deal directly with the entire population at risk, to, or afflicted by, cancer. Instead, it develops prototype projects which, if successful, can serve as models for use by labor unions, management, voluntary groups, health professionals and the public. In other words, the Cancer Control Program is responsible for the transfer of the latest information and techniques for the general health service delivery system through demonstrating and promoting improved approaches.

A demonstration is undertaken when the effectiveness and utility of a control technique has been established on a small scale. Demonstration activities are carried out to determine the potential health impact of the new technology, to develop methods for applying the technology in various settings, and to provide proven methods that can be continued through community support and be applied on a widespread basis.

This demonstration mechanism provides the opportunity for objective evaluation of innovations by critical, independent scientists, in accordance with previously agreed upon criteria. Therefore, a distinction between demonstration programs and the provision of service qua service is made: demonstration programs involve the establishment of innovative disease control technology through controlled, time limited projects conducted in limited populations for purposes of illustrating viability; service qua service involves providing established disease control techniques to all on a non-time-limited basis for purposes of assisting patients. The NIH supports the former, but not the latter. Insofar as service qua service is a Federal responsibility, it is provided only by other agencies within the Department of Health, Education and Welfare.

All Cancer Control projects have finite time limits. These limits are determined by the objective of the individual project(s). Most of the ongoing projects are scheduled to end after three years. During the actual period of performance, Control funds are not used to pay for routine patient care costs. In many instances, Cancer Control supplies only a part of the total project cost, with some funding coming from community cost-sharing, volunteers, or joint funding with another organization, such as the American Cancer Society (ACS). All contracts specify a definite scope of activity, and many stipulate

that a plan for local funding must be developed and implemented by the completion of the project period.

To help funded groups achieve self-support, the Cancer Control and Rehabilitation Advisory Committee (CCRAC) is examining the difficult problems of reimbursement. Review of the Administration's health service financing strategy is a part of the Advisory Committee's review for reimbursement. An assessment of the impact of National Health Insurance (NHI) was stated by the Assistant Secretary for Health in the Forward Plan for Health FY 1977-81, dated June 1975, as follows: "PHS activities related to knowledge development and disease control and prevention are not expected to be directly affected by NHI and, under most proposals, would continue to require separate funding outside the NHI mechanism." It is recognized that self-support of current projects by communities is essential in order to permit future reprogramming as new cancer research leads are developed and are readied for application in Cancer Control field tests and demonstrations.

Priority Development Process

Priority setting in the Cancer Control Program utilizes the following mechanisms:

- Planning Conferences utilizing a wide-range of experts establish the objectives and approaches for the CCP. This includes funding for each intervention area and specific projects to be included in the CCP. The Division of Cancer Control and Rehabilitation (DCCR) has set up its existing programs and a planning/monitoring system to monitor its program by such factors as objectives; as cancer sites and interventions; and as activities such as field testing, evaluation, demonstration and promotion.
- Each year DCCR staff and its Advisory groups review existing programs and plans. Further, merit reviews by peer groups review project performances which give additional insight to planning.
- State-of-the-Art Conferences are held to establish the efficacy of newer interventions and recommend proper applications.
- New projects are reviewed to establish a consensus on several factors that would determine its priority for funding. These factors include:
 - a) The need for the intervention - this requires that data from previous surveys, epidemiological studies, and clinical experience show that there is a gap in either the health care system or the public's knowledge and/or reaction to the existing health care situation.
 - b) The availability of resources - this considers the amount and availability of Federal funds and resources in the community to both conduct demonstrations and to continue the demonstrated intervention after Federal funding.

c) The approach to implementation - this requires integrating several important factors--funding mechanism (Grant versus Contract), present level of readiness of the intervention, type of control activity (training, field test, demonstration, etc.), setting where quality can be maintained (Cancer center, major medical center, Community-level program, hospital network, etc.), and the population to be emphasized.

- The final step in establishing priorities occurs in the development of project plans for RFPs and Grant Guidelines which are reviewed by the senior staff of DCCR. In addition, these materials have been conceptually reviewed by our Cancer Control and Rehabilitation Advisory Committee before development and issuance.

During FY 1977, continued steps were made to further involve the Cancer Control and Rehabilitation Advisory Committee (CCRAC) in major programmatic decisions. A greater effort was made to obtain CCRAC's recommendations on planned programs in the very early stage of program development. This was achieved through a comprehensive, detailed planning document that put forth specifics on both ongoing and planned programs. These specifics included: listing of all existing and planned project areas in terms of priority levels established by the DCCR staff; providing project resumes of both types of projects to provide indication of progress, relevance, need, and current status; and tables showing the specific contribution of each project area to interventions and sites. The CCRAC is holding a special meeting in late July 1977 to give this working document and the current status and future plans of the CCP a comprehensive quality review. Further DCCR project plans and specific issues were brought to the CCRAC throughout the year to obtain input from lay persons, scientists, and clinicians representing the medical community and the public-at-large.

As planned last year for FY 1977, these review processes will complete our objective to update planning based on experience gained in the first three years of division operation.

OFFICES OF THE DIRECTOR, DCCR

The Director is supported by two offices--Office of Committee and Review Activities and the Office of Planning and Analysis--and a Special Assistant for Liaison. These areas assist the Director, Associate Directors for Intervention Programs and Community Activities, and Branch Chiefs in planning, directing, and coordinating an integrated program of cancer control and rehabilitation activities. The Office of Planning and Analysis shares the responsibilities in planning and reporting both with the Office of Program Planning and Analysis, NCI, and DCCR management, and, in addition, provides the program staff with assistance in evaluation and statistical methodology. The Special Assistant for Liaison maintains DCCR's needed communications with professional societies, community organizations, and other Federal agencies and divisions that are involved in the health care as it relates to cancer. The Office of Committee and Review Activities provides staff assistance to the operations of committees that are concerned with advising DCCR on programs and programmatic policies, review of grants and contract proposals, and merit review of ongoing and completed projects.

Activities, highlighting major accomplishments and goals for the past year, are provided in the following pages of this section of the Annual Report.

Special Assistant for Liaison

The chief objective of the liaison activity in the Office of the Director, DCCR, is to establish and maintain an effective exchange of information on matters relating to cancer control and rehabilitation with other government agencies and with national professional and voluntary health organizations, as well as with other NCI Divisions and the total NIH community. In these activities, the Special Assistant for Liaison, DCCR, complements and supports liaison activities of other Branches in the Division.

DCCR's liaison activity provides staff support for the Interagency Coordinating Committee for Cancer Control and Rehabilitation which was chartered in 1975. This committee held two meetings in FY 76: one in August 1975, for a general review of cancer control activities in the various agencies under the Public Health Service; and one in September 1976, which was devoted to a consideration of ways and means of improving the quality and extent of cervical cancer screening in the United States, particularly in those programs being carried out through various federal agencies. A third meeting is planned for August or September 1977. This will probably be devoted to a state-of-the-art workshop in which the usefulness of urinary cytology in the detection of bladder cancer will be reviewed, and the indications for its application through federal agencies will be evaluated.

Through this liaison activity, DCCR also participates in meetings of the National Advisory Committee for Professional Standards Review, the Medical Radiology Advisory Committee of the Bureau of Radiological Health, and two committees of the National Academy of Sciences dealing with radiation

exposure. Liaison is also maintained with the Bureau of Health Planning and Resources Development, Health Resources Administration (HRA). Representation at meetings of these groups enables the Division to be aware of pertinent developments which relate to cancer control and provides an opportunity for contribution from DCCR when this seems appropriate.

The Special Assistant for Liaison participates in the NIH Collaborative Program Directors' meetings to enable the NIH community to be informed of DCCR program developments and provides the Division with information on NIH issues of concern to the Cancer Control Program.

Following the wide distribution of a Special Communication from the Director, NCI, and the Director, DCCR, entitled, "Information for Physicians on Irradiation-Related Thyroid Cancer," the mail and telephone calls to both the Office of Cancer Communications and the Special Assistant for Liaison, DCCR, increased remarkably. Several excellent recall programs were initiated across the country. These were designed to contact and bring in for medical examination individuals who had received irradiation to the head and neck in infancy or childhood, 10-35 years before. The Columbia Broadcasting System decided this was a timely topic and devoted a 15-minute segment of its "60 Minutes" program to this subject on January 16, 1977. This led to a still greater increase in mail and telephone calls to OCC and DCCR. Since the professional education phase on this subject is now considered to have been reasonably well covered, a public education phase, sponsored by NCI in cooperation with the American Cancer Society, is about to begin with distribution of appropriate materials through the divisions of the American Cancer Society, and through the press, supermarkets, etc. TV coverage was well served by the "60 Minutes" broadcast.

Liaison is also active with other parts of the Division and with national professional and voluntary health organizations to identify special groups in the population who are at increased risk for cancer. It contributes to the exploration of current knowledge about the most acceptable methods for detection of cancer in these groups and for the management of their disease as a basis for recommendation of possible action to the Director, DCCR. In this effort, state-of-the-art conferences may be considered as useful tools in consensus development.

This function in the Office of the Director is responsible for coordinating that section of the US-USSR Cooperative Agreement on Cancer which deals with Cancer Control and Cancer Centers. At present, cooperative programs are in progress dealing with the following:

Problem Areas

- 1) Detection and Early Diagnosis of Breast Cancer
- 2) Rehabilitation of Breast Cancer Patients
- 3) End Results of Breast Cancer Treatment
- 4) Role of Cancer Centers in Cancer Control and Continuing Education

In August, September, and October 1976, the Special Assistant for Liaison, DCCR, had responsibility for working with the US-USSR Oncologic Research Activities, NCI, in arranging both a scientific and a travel program for the visit of the Soviet Delegation on Cancer Control and Cancer Centers to the United States. These appear to have been very successful.

Soviet representatives on the subject of Rehabilitation of Breast Cancer Patients visited DCCR the end of May to review a pilot study on rehabilitation carried out on 50 breast cancer patients in the USSR and 50 breast cancer patients in the U.S.A. The forms used in this pilot study and the data obtained were reviewed and appropriate modifications made in the protocol. The revised protocol will now be used in a larger study of breast cancer patients in each country. One of the members of the Soviet team remained in the United States for a two month tour of cancer facilities here with special emphasis on the diagnosis, treatment and rehabilitation of breast cancer patients. Arrangements for this travel program were made by the Special Assistant for Liaison.

In July and August 1977, the Special Assistant for Liaison, DCCR, will assist in the organization of a return visit of the U.S. delegation on Cancer Control and Cancer Centers to the Soviet Union in September for a review of progress under the four problem areas upon which agreement was reached last year. At that time, consideration will be given to broadening the field of cooperation to include other cancer sites.

The ongoing program activities of the Division are discussed by this function in the Director's Office in many forums throughout the country. Attendance at appropriate professional meetings by the Special Assistant for Liaison has served as a means of sharing highlights of Division endeavors with a wide professional audience, and of collecting and disseminating information of interest to the staff.

Plans

Over the next five years the Special Assistant for Liaison expects to continue helping to maintain and strengthen ties with other government agencies within the Public Health Service and to develop stronger relationships with other government agencies outside of PHS.

This function will continue fostering and strengthening relationships between DCCR and national professional and voluntary health organizations and medical specialty societies. It will organize, or assist in the organization of, state-of-the-art conferences as may be considered desirable. It will continue to act as the coordinating office for the US-USSR cooperative agreement in the Area of Cancer Control and Cancer Centers.

Office of Committee and Review Activities

The Office of Committee and Review Activities (OCRA) within the Division of Cancer Control and Rehabilitation provides the central focus for the management and administration of the centralized DCCR peer review system for grants and contracts.

In addition to traditional review functions, OCRA has in the past year fully implemented a system of merit peer review of DCCR contracts. The purpose of this review is to provide peer assessment of the progress of ongoing projects. Through this assessment, the committees provide advice to the Division staff on project accomplishments; recommend modifications or changes which will effect improvements; and identify irremediable deficiencies. The merit peer review is a mandatory requirement of this Division. It is ordinarily conducted at midpoint in the contract's life-span; however, there are other conditions under which a merit review might be undertaken. A request for a merit peer review may be initiated at any time in a contract's life-span by the Director of the Division and other relevant staff such as the project officer; by the Cancer Control and Rehabilitation Advisory Committee; or by the contractor. A merit peer review may be considered at the completion of the contract period on all contracts issued under a single Request for Proposal (RFP). This review serves as a means of assessing the significance of the total program and of identifying the implications for further Division commitments. Under ordinary circumstances, each contract receives just one merit review.

Within the Office of Committee and Review Activities, there are four technical review committees chartered to carry out the DCCR grant and contract review function. These committees advise the Director on the scientific merit of the projects they review. Each committee meets on an average of six to ten days a year and is composed primarily of representatives from a number of disciplines including the medical, biological, behavioral, and communications sciences. Also represented among the membership are the fields of public health education, health administration, and health planning. In the past year the four technical review committees conducted 17 meetings for a total of 30 days of review. Two hundred and eighty-six projects went through the review cycle at least one time. Of the projects reviewed, merit peer review was conducted on 68 contracts. One hundred and three site visits were conducted during this period.

The grant review committees continued to accelerate during this year. One hundred and thirty-seven grant applications were reviewed either for initiation or renewal. Of these, 27 new grants were approved and funded. Grants expenditures for this year total \$16,973,000. This figure represents a substantial increase over the previous year.

In addition, the Office of Committee and Review Activities is responsible for the management of the Cancer Control and Rehabilitation Advisory Committee and its three subcommittees. Members of this Committee are selected on the basis of their outstanding individual qualifications and recognized expertise in the fields of concern in cancer control: prevention and detection, pre-treatment evaluation; treatment, rehabilitation, and continuing care. Membership also includes representation from the lay community. This Committee ad-

vises the Division staff on all matters relating to the National Cancer Institute's activities in the field of cancer control and rehabilitation, and on the coordination of the entire national effort to control cancer. The Advisory Committee has appointed three subcommittees, which represent major program thrusts of the Division. These are the Subcommittee on Prevention; the Subcommittee on Community Activities; and the Subcommittee on Cost Reimbursement. The Advisory Committee and its subcommittees each meet at least four times a year.

This Office serves as the liaison between DCCR and the National Cancer Institute's Office of Committee Management. OCRA staff provide the most current information and guidance to the review committees and to DCCR program staff on the legislation and regulations relevant to the peer review system. OCRA also provides advice, guidance and direction to universities; to medical and allied health institutions and societies; to community organizations; and to individual scientists, relative to the policies and procedures of the Division on contract and grant support in the area of cancer control and rehabilitation. In order to facilitate its consultative and information function, the OCRA staff has prepared Grant Review Guidelines and an operational handbook on DCCR review procedures.

Office of Planning and Analysis

The Office of Planning and Analysis (OPA) was established during mid-1977. This office resulted from a detailed review and management study of DCCR operations. It reinforces two major functions in the overall DCCR operations: 1) planning and reporting for DCCR, and 2) biostatistical, epidemiological, and statistical analysis and design support to DCCR staff and program. In the reorganization that eliminated the Supportive Services Section of DCCR, OPA assumed responsibilities for project administration of several projects that were concerned with broad issues that affect most or all of DCCR's activities. Other ongoing Supportive Services lead projects were relocated to the DCCR branches that had program responsibilities that matched these projects. The projects assigned to OPA included those concerned with issues such as: investigating evaluation and analysis methods; determining future requirements for program-wide Cancer Control interventions; investigating methods to improve care through Third Party payments; and developing base-line data for assessing the impact of the CCP.

These project management and divisional supportive activities, as stated in OPA's functional description, are:

"The Office of Planning and Analysis 1) provides assistance to the Director and serves as the Division's focus for planning and analysis activities, including development of overall objectives, alternatives, and policy positions; 2) coordinates and develops Division's input to the National Cancer Program Plan; 3) provides guidance and assistance to staff on preparation and revision of program and project plans; 4) analyzes resource needs; 5) designs and implements an overall monitoring

and evaluation program; 6) advises and assists operating elements of the Division in developing proper evaluation procedures; 7) coordinates with other NCI evaluation activities such as the Surveillance Epidemiology and End Results Program (SEER)."

In developing this area, existing staff was augmented by the addition of a senior person for planning and a biostatistician experienced in cancer for providing design and analysis support to program staff.

Plans

During FY 1978 this Office's support to program staff will be increased to adequately cover subjects such as: evaluation methodology; analysis of existing data sets; analytical reviews of methodologies and approaches being used in ongoing projects; management of existing large data collection, processing, and analysis projects; reviewing new knowledge in the epidemiology of certain cancers for use in the CCP; and assisting project officers and their contractors in analyzing and publishing data collected, and outcomes, of projects with the CCP.

Contracts and Grants

Throughout this document, summary descriptions of contracts and grants follow the narrative of the organization to which they are assigned. Note that "FY 1977 Funds" refers to funding for the period October 1, 1976 through September 30, 1977, and that "TQ" refers to Transition Quarter funding from July 1, 1976 through September 30, 1976.

CONTRACT SUMMARY

1. Title: Program Planning Evaluation and Related Support for the DCCR
2. Principal Investigator: Paul Cumming, Ph.D.
3. Performing Organization: JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22101
4. Contract Number: 55200
5. Starting Date: 5/16/75 6. Expiration Date: 4/30/78
7. Objective: To provide supportive services to the Office of the Director and all DCCR branches and program areas.
8. Proposed Course: (1) To maintain and operate the Program Management Support System; (2) data management for cervical cancer screening program; (3) provide support to the Breast Cancer Detection Demonstration Project; (4) provide support to the carcinogen information dissemination effort; (5) conference administration; (6) resources analysis; (7) preparation of documents, briefings, and presentations; (8) administrative services; and (9) quick response program analysis.
9. Progress: Progress during the year has included:
 - (1) Program Management Support System -- completed review and update of data. Provided project and higher level information on all DCCR contracts, grants and RFP's.
 - (2) Cervical Cancer Screening Program (CCSP) -- provided support in addressing methods by which contractor performance could be monitored and improved. Developed techniques for assuring responsive central management.
 - (3) Breast Cancer Detection Demonstration Project (BCDDP) -- provided support during the transition of BCDDP from the Biometry Branch to DCCR, including orientation of new DCCR staff.
 - (4) Maintained a continuous flow of documents, briefings and presentation.
 - (5) Provided planning assistance, coordinated and administered several meetings and conferences upon request from DCCR.

(6) Cancer Control Planning Conference -- update to the Columbia Conference a comprehensive final report was completed providing information on virtually all aspects of managing a Cancer Control Planning Conference to update similar conferences held several years ago. This report is currently under review.

(7) Review and evaluation of carcinogen documents.

10. Significance for Cancer Control: Through these projects, DCCR staff can compile and analyze information for determining the course of the Cancer Control Program.
11. Project Officer: Hugh E. Mahanes, Jr.
12. FY 1977 Funds: \$480,000

CONTRACT SUMMARY

1. Title: History of Cancer Control
2. Principal Investigator: Lester Breslow, M.D., M.P.H.
3. Performing Organization: University of California at Los Angeles
School of Public Health
The Center for Health Sciences
Los Angeles, California 90024
4. Contract Number: 55172
5. Starting Date: 6/30/76
6. Expiration Date: 6/29/77
7. Objective: To determine the extent and limitations of progress in cancer control from 1946-1971; to elucidate the factors that favored or inhibited the application of the available technology; describe and evaluate the successes and failures of various national and state voluntary programs and to suggest directions for future development.
8. Proposed Course: To search and assemble published and unpublished literature; formation and storage of data in the computer and the abstraction of information.
9. Progress: Excellent progress has been made in achieving the objectives of the study. Both primary and secondary sources yielded valuable data. The contractor exploited the advantage of interviewing men and women who have had a major share in creating the history itself. The contractor has developed a unique abstracting capability for synthesizing and identifying significant portions of the literature by electronic means for staff use. During 1976, the contractor asked for an expansion of the contract to include greater depth of investigation of cancer control activities and progress which occurred in the regional medical programs. The expansion was added and work progressed as planned. The project was on schedule and completed in FY 1977.
10. Significance for Cancer Control Program: In order to plan potentially beneficial demonstration programs, the DCCR staff needs to know the efficacy of past efforts in cancer control. Hopefully, this contract will save much money which might otherwise be directed toward redundant programs.
National Cancer Program Objective: C8 Approach: C8.2
11. Project Officer: Hugh E. Mahanes, Jr.
12. FY 1977 Funds: \$11,000

CONTRACT SUMMARY

1. Title: Education for Cancer Control
2. Principal Investigator: Lester Breslow, M.D., M.P.H.
3. Performing Organization: University of California
at Los Angeles
School of Public Health
The Center for Health Sciences
Los Angeles, California 90024
4. Contract Number: 65194
5. Starting Date: 10/1/75
6. Expiration Date: 3/31/77
7. Objectives: To develop suitable modes, settings and personnel qualifications needed to assist in the education of health professionals and others who are most specifically concerned with conducting, administering, and participating to a major degree in cancer control activities.
8. Proposed Course: Develop objectives of proposed programs, determine the numbers of trainees needed, design model curricula, determine optimal length of training, and develop evaluation criteria.
9. Progress: This project was completed in March, 1977. It resulted in the development of materials that are currently being reviewed and evaluated.
10. Significance for Cancer Control Program: The implementation of future programs in cancer control is dependent on the existence of an adequate pool of properly trained personnel. This procurement will identify the skills needed for future programs and will design educational programs for their production and entrance into the health maintenance community.
National Cancer Program Objectives: C3, C5, C7
Approaches: C3.5, C5.5, C7.5
11. Project Officer: Hugh E. Mahanes, Jr.
12. FY 1977 Funds: No 1977 Funds

CONTRACT SUMMARY

1. Title: Review of Cancer Education in Medical and Dental Schools
2. Principal Investigator: Richard F. Bakemeier, M.D.
3. Performing Organization: American Association for Cancer Education
65 Bergen Street
Newark, New Jersey 07107
4. Contract Number: 55191
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/77
Extension Date: 6/29/78
7. Objective: To document, classify and assess the current status of cancer education in the medical and dental schools in the territorial United States. This data would form the basis for a report which would be made available to all those interested in cancer education and would assist DCCR to plan more effective programs for health professionals.
8. Proposed Course: Consult with experts in curriculum design, data collection, and analysis; consult with organizations such as American Association of Medical Colleges to explain project and obtain their advice. Also, develop a plan for the collection of information on cancer education.
9. Progress: An overall study design has been accomplished, consisting of written questionnaires for administrators, faculty and students; an access strategy to schools to assure maximum participation; a site visit design to verify and amplify data obtained by questionnaire, and an analysis design. A 13 month delay in the implementation of the data collection segment of project was caused by changes in the approval process of the questionnaires which were submitted for approval in February, 1976, and were subsequently affected by the new Office of Management and Budget (OMB) regulations, altering the procedures for any new requests for approval of questionnaires. The new OMB regulations forced contractor to redesign and resubmit its questionnaires and the application for approval under the new guidelines. Approval was granted by OMB in March, 1977. The government-caused delay of 13 months has forced the contractor to request a continuation of the contract for an additional year to complete the data collection and analysis segments of the workscope.
10. Significance for Cancer Control Program: To plan for future programs in undergraduate, graduate and continuing education, it is necessary to know the current status of cancer education.

National Cancer Program Objectives: C3, C5 Approaches: C3.5.1, C5.5.1
11. Project Officer: Mr. Steven Schwartz
12. FY 1977 Funds: \$100,000

CONTRACT SUMMARY

1. Title: Demonstration for Reimbursement in Cancer Control
2. Principal Investigator: Howard Berman
840 North Lake Shore Drive
Chicago, Illinois 60611
3. Performing Organization: Blue Cross Association
4. Contract Number: 65371
5. Starting Date: 8/01/76
6. Expiration Date: 7/31/81
7. Objective: To develop and demonstrate a cost-effective cancer screening program, and to attain continued financing for the program on an ongoing basis from third-party sources.
8. Proposed Course: To evaluate the effectiveness of various tests for cancer in terms of ability to detect disease at an early stage, the cost-effectiveness of early detection, and the administrative and financial feasibility of such procedures.
9. Progress: After 8 months, a draft plan for the balance of the contract period has been developed. Tasks accomplished include: (1) Review of studies and other current information related to screening for the early detection of cancer and the administrative and reimbursement aspects of operating a screening program; (2) determination of a screening program; (3) development of an administrative package for the cancer screening program; (4) preparation for project demonstration; (5) development of an evaluation methodology; (6) development of a data collection format; (7) collection of baseline data; (8) securing of selected demonstration area commitments; (9) securing of selected provider demonstration area commitments; (10) securing of commitments from selected employers of insured groups in demonstration areas; (11) procurement of agreement in control areas for the collection of data.
10. Significance for Cancer Control Program: To identify, field test, and evaluate the cost-effectiveness of screening in conjunction with utilization of the allied health professionals and low-cost facilities.

National Cancer Program Objective: C2, C3
Approaches: C2.4, C2.6, C3.1, C3.4
11. Project Officer: Mary Jo Gibson
12. FY 1977 Funds: \$53,000

CONTRACT SUMMARY

1. Title: Working Group for the Review of the Breast Cancer Detection Demonstration Project
2. Principal Investigator: Oliver H. Beahrs, M.D.
Rochester, Minnesota 55901
3. Performing Organization: N.A.
4. Contract Number: 75379
5. Starting Date: 3/11/77
6. Expiration Date: 3/11/78
7. Objective: The major objective of the Working Group for the Review of the Breast Cancer Detection Demonstration Project (BCDDP) is to examine the BCDDP design, implementation, and existing data sets to determine the potential within this program to provide information that will be useful to NCI in developing guidelines in the near future on breast cancer screening and, within this capability, reporting preliminary findings that are relevant.
8. Proposed Course: These areas will be examined to determine the BCDDP capability and the methodologic requirements to provide such reductions in mortality and morbidity and to provide for other information specified in the above areas to arrive at definitive recommendations for the future conduct of the BCDDP. The required analyses will be conducted as an independent review of the total BCDDP objectives and implementation and will include NCI/ACS screening policies in the BCDDP, screening centers operation, and Data Management Center (DMC) operations.
9. Progress: This is a new contract. Progress to date includes establishment of an epidemiological/biostatistical subgroup and a clinical review subgroup to work in concert on the review of the BCDDP. Two preliminary meetings have been held and itemized requirements for information and data have been submitted to the Data Management Center. A preliminary report is expected in the summer of 1977.
10. Significance for Cancer Control Program: Will provide a critical analysis and review of all data and procedures in the BCDDP from which decisions can be made on future operations of the BCDDP.

National Cancer Program Objective: 3, 4. Approaches: 3.2, 4.2
11. Project Officer: Mr. Ben Acton
12. FY 1977 Funds: \$220,340

CONTRACT SUMMARY

1. Title: Measurement of the Cost of Cancer Care
2. Principal Investigator: Dr. G. F. Vanderschmidt
55 Wheeler Street
Cambridge, Massachusetts 02138
3. Performing Organization: ABT Associates, Inc.
4. Contract Number: 65216
5. Starting Date: 12/5/75
6. Expiration Date: 9/30/77
7. Objective: Obtain current and comprehensive measurement of the direct and indirect costs related to cancer care. Costs for diagnosis, pre-treatment evaluation, continuing care, and rehabilitation will be studied in terms of incurred costs versus specific stages of disease, organ site cancers, treatment regimens, type of interventions, institutional and geographical settings, payment sources, out-of-pocket expenses, and significance of specific cost(s) to overall costs.
8. Proposed Course: Three phase approach with the first phase providing for: 1) research of past cost studies to determine most appropriate approaches and methodologies for cost collection, analysis, validation, projection, and disaggregation; 2) edit, record linking, and analysis of a third national survey cost data to assess the ability of this data to fulfill requirements; and, 3) ranking of cost elements in terms of contributions to cost, ability to ascertain measurement, and future needs in planning and analyzing costs. Phases 2 and 3 provide for the development of a new or augmented survey and then the collection efforts. Conduct of these phases is optional to NCI pending an assessment of third national cancer survey to fulfill needs and the possible contribution of a new or augmented study. Initial award was for Phases 1 and 2.
9. Progress: Phase I and part of Phase II have been completed. Past studies on cost including a review of the cost portion of the Third National Cancer Survey were completed. Methods revealed by this review have been incorporated into the design for this study. A priority panel of experts including Third party payor, consumer advocate, epidemiologists, clinician (with specialties in various cancer sites), hospital administrator, and economists were used to structure the study through assigning priorities to areas and elements that would produce the most benefit to using the costs in planning cancer program. This and input from an interagency advisory committee were significant in the study design. The study design, Phase II, has been completed. Data collection instruments have been submitted to NIH for OMB approval. Upon approval by OMB, a field test in two locations will be conducted. All task reports for Phase I were completed ahead of schedule. Phase II, including the field test and possible revisions, will be completed in this fiscal year. Phase III and Phase IV, which involved selecting and coordinating study on a nationwide basis and then the data collection and analysis, will be initiated subsequent to

completion of Phase II. The present study provides for a national sample and disaggregation of costs for 12 cancer sites (representing over 75 percent of the cancers), stages of the disease, and major interventions. Design also provides for disaggregation of data by type of hospitals, primary physician, who pays, in-hospital versus at-home care, and several general measurements of outcome, but the costs attendant to the total sample size does not allow for a high reliability factor in these latter areas of cost disaggregation.

10. Significance for Cancer Control Program: Will provide needed cost data to improve selection of, and expected side effects from, specific interventions for field testing and demonstrating methods and techniques for widespread application.
11. Project Officer: Mr. Ben Acton
12. FY 1977 Funds: \$38,000

CONTRACT SUMMARY

1. Title: Data Management Center for Breast Cancer Detection Demonstration Projects
2. Principal Investigator: George T. Foradori, Ph.D
Philadelphia, Pennsylvania 19104
3. Performing Organization: University City Science Center
4. Contract Number: 65376
5. Starting Date: 3/28/77
6. Expiration Date: 3/28/78
7. Objective: To provide staff and operate a Data Management Center for the 27 Breast Cancer Detection Demonstration Projects.
8. Proposed Course: The contractor shall provide the following: (1) design, implement and maintain a computer system for the collection, editing, storage, and retrieval of all data collected in the Demonstration Projects; (2) assume the responsibility for the receipt and control of all documents and other materials transmitted to the Data Management Center by the Demonstration Projects, the Data Conversion Centers, the Computer Center, NCI, ACS, and any other institution forwarding patient data to the Data Management Center; (3) assure the completeness and accuracy of all records with manual and computer edit procedures; and, (4) maintain records, provide listings, provide reports, provide manuals, etc., to fulfill its function as a Data Management Center.
9. Progress: Much effort was placed on the furtherance of the daily production activities, the Systems and Programming work, as well as on the fostering of good relationships with the 29 Screening Projects, in total support of BCDDP data management activities. In addition, a number of corrective steps were taken in response to the relevant criticisms of the Merit Review Committee. In reviewing the activities over the past eight months, genuine progress can be seen, and it is clear the major inroads have been made into the activities outlined in the Work Plan proposed to NCI in October 1976, and approved by the Project Officers. Work was finalized on the Edit and Update Program, which is the heart of the DMC System. By November, the modified program re-edited all the backlogged material extant up to that date, and the resulting CFCD's were sent out to all the Screening Projects. In addition (November, 1976), the Inventory Program was modified to allow for the input and processing of CFCD Inventory transactions. The TRIAD System for the Case Control Study is in the final stage of testing. In July and August, at the height of the Mammography controversy, the DMC was requested to send numerous reports to the NCI. In addition, in further response to the creation of the Evaluation Working Group by NCI to study the overall utility of the BCDDP data, and, in order for this Group to have the most recent data on cancers available, projects were requested to send a list of all cancers found since April 1, 1976, to the DMC. This list

updated a July request for pathology data through March 31, 1976. The information was then aggregated by the DMC's Pathology Registrar, and submitted to the Working Group via NCI.

10. Significance for Cancer Control Program: Will provide an analysis of data emanating from the Breast Cancer Detection Demonstration Projects.

National Cancer Program Objectives: C2, C3 Approaches: C2.2, C2.3

11. Project Officer: Ben E. Acton

12. FY 1977 Funds: \$1,041,725

II.

INTERVENTION PROGRAMS



Section II

INTERVENTION PROGRAMS

The Intervention Programs area, the largest program area of DCCR, is responsible for: 1) identifying, field testing, and evaluating new or improved cancer intervention techniques and methods; and 2) demonstrating proven techniques and methods in various settings for persons of high risk for cancer, and for most common cancer sites. When shown to be feasible, practical, beneficial, and acceptable to the patient, medical practitioner, and health care system, these intervention approaches can then be promoted for wider use in community settings. In FY 1977, over 70 percent of the total DCCR funds for contract and grant activities was managed by the Intervention Programs area.

The Intervention Programs, representing the initial efforts of the Cancer Control Program, initiated their first projects in FY 1974. These projects were developed to bring the latest proven protocols for the treatment of acute lymphocytic leukemia (ALL) to wide application among local physicians in community hospitals. These network efforts have been expanded to other cancers and have been successful in upgrading treatment through patient management protocols and outreach training and consultation from the more "cancer-experienced" institutions. The initial treatment efforts were followed shortly by: 1) detection intervention programs in carcinoma of the breast, cervix, head and neck, lung, vagina (DES study), and cutaneous melanoma; 2) a major emphasis in developing rehabilitation methodologies and techniques; 3) oncology treatment programs in small community settings; 4) cancer control outreach through the Clinical Cooperative Groups; 5) educational programs in mammography, oncology nursing, thermography, and maxillofacial prosthetics; 6) quality control programs in radiation physics and pathology; and 7) prevention programs consisting of the development of chemical carcinogenesis monographs; monitoring surveys of vinyl chloride workers in Louisville, Kentucky and asbestos workers in Tyler, Texas; smoking survey among health professionals; and interagency agreement with OSHA on occupational cancer information.

In most of the intervention programs, the basic approach has been to field test, evaluate, and demonstrate a single intervention, such as a field test of screening techniques to a selected cancer site. This avenue in some respects, models the traditional approach to cancer research as exhibited by clinical trials, but with a major difference being the size of the target population and an additional concern that implementation methodologies demonstrate approaches applicable in a variety of settings. Lessons learned and knowledge successfully gained from these projects are then to be integrated into the Community Activities Program to test and evaluate the benefits of comprehensive multi-intervention, multi-site programs directed at an entire community.

DCCR's Intervention Programs include the cancer-related intervention areas of prevention, detection, diagnosis, pretreatment evaluation, treatment,

rehabilitation, and continuing care. They address all eight objectives and approach areas defined in the Cancer Control Plan. Responsibilities are assigned to three Branches: 1) Prevention; 2) Detection, Diagnosis, and Pretreatment Evaluation; and, 3) Treatment, Rehabilitation, and Continuing Care. Specific projects within each Branch are discussed in the narratives and project summaries which follow. Treatment, Rehabilitation and Continuing Care is divided into three subsections, Treatment Programs, Rehabilitation Programs and Rehabilitation Research projects.

PREVENTION BRANCH

The Prevention Branch of the Division of Cancer Control and Rehabilitation is responsible for the Cancer Control Program objective of making practical and effective cancer prevention methods and techniques available to health professionals and the public, and of encouraging their use. The Branch deals with activities both in primary and secondary prevention. Projects have been directed toward the recognition of active carcinogenic agents, the identification of persons at risk, the development of procedures for reducing exposure to such agents, the assessment of the most appropriate avoidance methods, the development of necessary requirements and models for follow-up on those already exposed, and the promotion of resulting measures through educational and demonstration programs.

Objective

Prevention of cancer involves freedom from occurrence of those events which lead to irreversible effects ultimately resulting in tumor induction. Working toward this end, the cancer control prevention activities involve the development of systematic dissemination methods for educating the public and professionals on the causative factors for the disease and the avoidance of exposure to carcinogenic agents.

Several options for reducing disease and disability from carcinogenic hazards are: 1) to create strategies to minimize exposure of the public to such hazards (chemical, physical, etc.) in order to reduce the rates of hazardous exposures; and 2) to create strategies to protect the public against disease and disability in situations where exposures have occurred and where techniques are available.

Efforts are in progress to identify those carcinogenic agents that warrant specific prevention control activity. These efforts consist of state-of-the-art workshops, conferences, and monograph development projects which focus on particular chemical or physical carcinogens. During the past year, state-of-the-art workshops and conferences were held on smoking and health, and on the late effects of irradiation to the head and neck in infancy and childhood and the physics of mammography. The latter workshop sought to answer questions raised by physicians and the public about thyroid cancer resulting from X-irradiation in childhood. During the coming year, workshops are planned for public education strategies in smoking, bladder cancer detection and prevention, and ultrasound in detection and prevention. As part of a chemical carcinogen survey and analysis effort, monographs are being completed for asbestos, diethylstilbestrol (DES), and vinyl chloride. For other key carcinogens which are being identified through an external review process, monographs encompassing practical cancer control prevention activities will be prepared. These include delineation of risks resulting from exposure and strategies for reducing exposure of individuals in the community setting.

The Prevention Branch has worked closely during the past year with the newly created Clearinghouse for Environmental Carcinogenesis, Division of Cancer Cause and Prevention (DCCP). This Clearinghouse is largely concerned with reviewing chemical agents that have been tested for carcinogenicity in the bioassay program and assigning risk estimates to those compounds. As soon as new information is made available by the Clearinghouse on specific compounds, DCCR will begin to develop educational and informational strategies for these compounds.

During the past year, the Prevention Branch has continued to explore innovative courses of action to identify, field test, demonstrate, and promote new and improved prevention technology. One step in this direction has been the establishment of a subcommittee of the Cancer Control and Rehabilitation Advisory Committee which is concerned with strengthening and expanding the prevention intervention activities. The committee has focused on primary prevention areas such as modification of health behavior for the general public, health professionals, and high-risk populations.

Current Activities

The current and proposed cancer prevention intervention activities in environmental carcinogenesis are focused on: occupationally-associated cancer; cancer associated with tobacco and chemicals; cancer associated with ionizing radiation; and prevention strategies directed toward medical professionals, populations at risk, and the public at large.

Smoking Education and Information

Lung cancer will kill 83,800 persons this year, and an additional 93,000 people will develop the disease. Lung cancer accounts for 30 percent of all deaths from cancer among men and a rapidly increasing proportion of all deaths among women. Cigarette smoking contributes to at least 80 percent of the disease.

The effectiveness of controlling lung cancer through primary prevention is illustrated by the 30 percent reduction of mortality among British male physicians during the period of 1954 to 1964 when many stopped smoking (compared with the 25 percent increase among all men in England and Wales who generally persisted in smoking during the same time period), and environmental controls were also put into effect. During the past year, DCCR has continued to fund several selected health education and smoking cessation programs conducted by the Bureau of Health Education, Center for Disease Control (CDC) in Atlanta. Under this program, the fourth National Teenage Survey on Smoking and a study on professional attitudes and behavior toward smoking were completed.

Several initiatives planned included activities to: 1) exert major efforts to develop smoking withdrawal programs to advise the public of consequences of smoking, and especially of the hazards of starting the smoking habit at an early age; 2) develop and provide information on the interaction between smoking and environmental or occupational situations leading to synergistic augmentation of the hazard; and 3) accelerate efforts for appreciation of less harmful smoking products. In New York State, a program with

major emphasis in this first category has already been implemented. The program involves a school-based smoking prevention activity directed toward children (grades 5-9) and a program for training teachers. In the second category, a public education program involving workers exposed to high levels of asbestos has been implemented. A study of the behavior and attitudes of physicians and other health professions with regard to cigarette smoking was released during this fiscal year.

It has been estimated that cessation of cigarette smoking can eliminate all but a small percentage (10 percent) of the excess risk of lung cancer. The logistics of primary prevention are simply that 81 percent of lung deaths can be avoided by not smoking. Because advances in detection of lung cancer can improve the cure rate by only 2 percent, the odds are approximately 40 times higher in favor of primary prevention for this particular organ site.

Occupationally-Associated Cancer

It has been estimated that 60 to 90 percent of all cancers may be due to environmental factors with occupational factors contributing some 4 to 10 percent of this total. Some materials such as asbestos, coke oven emissions, and vinyl chloride have been implicated in occupational cancer. For the purpose of reviewing scientific information on occupational cancer and using this information to develop an educational program to reduce the risk of work-related cancers, DCCR entered into an interagency agreement with the Occupational Safety and Health Administration (OSHA). The project, entitled "Occupational Cancer Information and Alert Program" was initiated in June 1975.

Five contracts have been established by OSHA using the funds transferred from DCCR covering various areas of this program. The first contract with the National Academy of Sciences provided for a symposium that was held on December 2-3, 1976. The symposium was conducted by the Committee on Public Information in the Prevention of Occupational Cancer for the purpose of mobilizing the best information on occupational cancer education. The symposium proceedings became available April 1977.

A cancer alert film designed to inform employers and employees about health problems due to carcinogens in and around the workplace is being produced by George Washington University under the second contract. The film will be pilot tested in ten cities on prime time commercial television. The filming will be followed by a televised discussion of the film and its application to problems in the local area. The showing is scheduled for early autumn.

Educational materials on the recognition and control of occupational cancer for five worker groups considered to be at high risk are being developed by Abt Associates under a contract initiated in July 1976. These materials will be used in training sessions with employers and employees. The training sessions will be conducted by the George Washington University Department of Medical and Public Affairs, under a contract that went into effect in September 1976. The training sessions will be provided on location and are expected to begin in late 1977 for asbestos and coke oven workers.

Simultaneously with the development of the program, a comprehensive evaluation of the total Occupational Cancer Information and Alert Program is being conducted by the Denver Research Institute. The intent of the evaluation is to ascertain strengths and weaknesses of the program concept and to provide recommendations to OSHA for improvement as this program develops.

Carcinogen Information and Prevention

A contract with the Stanford Research Institute, entitled Survey of Exposure to Chemical Carcinogens and Recommended Control and Intervention Programs, has been surveying carcinogenic agents to identify those that warrant particular control activity. Practical control and prevention methods are to be developed for these compounds. This project is now into its second year. With the assistance of experts knowledgeable in chemical carcinogenesis, an initial set of 147 chemicals were identified as having the possibility of being human carcinogens. Dossiers, prepared for each of these chemicals, were used as the basis for selection of candidates for cancer control monographs. Twenty chemicals were identified as meeting the criteria set by the committee of experts, and reports were prepared containing information on the physical and chemical properties, human exposure data, biological properties, epidemiological and toxicological data, and a control prospectus. These reports provided the information needed for selection of the most important chemicals for cancer control monograph subjects. Three were chosen--vinyl chloride, asbestos, and diethylstilbestrol. The monographs contain information on the regulatory history of the compound, its production, levels, use, emissions and human exposure. Discussion of both non-carcinogenic and carcinogenic effects are included. Suggested cancer control programs are described which include engineering contents, medical surveillance, and educational programs. During this year the vinyl chloride monograph has been completed; the remaining two are expected to be completed by the end of the contract period.

Monitoring and Education of High Risk Populations

In response to the needs of high risk occupational groups, two cancer control intervention programs continue for asbestos and vinyl chloride workers with the following overall objectives:

- . To make available medical expertise and technology to the affected workers.
- . To implement several diagnostic and early detection techniques.
- . To provide education in the form of consultation and meetings with the workers and their families, especially with regard to smoker education and smoking cessation for the asbestos workers.
- . To serve as a model demonstration surveillance project, involving well-defined occupationally affected cohorts.
- . To develop practical knowledge on carcinogenic exposures that will assist the Division of Cancer Control and Rehabilitation in the development of preventive strategies.

- . To develop a coordination and statistical management system for correlating laboratory, clinical, and epidemiological data.

It is expected that these programs will have far greater relevance than simply to provide a vehicle for clinical examination; they will contribute to excellence in clinical care of these patients and hopefully lead to early cancer detection and prevention.

The Tyler Asbestos Workers' Cancer Surveillance and Education Project is following the former asbestos workers over a five-year time period. These workers were employed by the Pittsburgh-Corning Co., which operated the plant from 1954 until it was closed in 1972 by EPA. During these eighteen years, the plant employed 878 cohort workers and 163 part-time workers were involved in the unloading of asbestos from railroad cars. Many of these workers already have, or are expected to develop mesotheliomas, asbestosis, and other asbestos related respiratory disorders. It has been determined that the time required from the time of inception of the tumor to a size detectable by radiology is more than five years. The progression of the tumor is very rapid and the life expectancy of these workers with lung cancer is only about 6 months. Thus, early detection by x-ray plans a very limited role in the prolongation of life of these patients. Early detection by utilization of sputum cytology is also being employed. Smoking plays a very important aggravating role in the development of lung cancer in asbestos workers. It is estimated that the risk of developing lung cancer in workers exposed to asbestos is twice that in the control population. However, the risk of asbestos workers who smoke one or more packs of cigarettes daily is eight times that of those asbestos workers who never smoked. Since 87% of the cohort are smokers, the smoking cessation program which was implemented this year will play an important role in the prevention of cancer in these workers.

A Statistical Data Management and Coordinating Center for the Tyler Asbestos Workers' Program was also established during the past year. A computerized data management system has been developed in order to support the clinical and office activities of Tyler in order to maintain the patient registry and to store and retrieve the data. Among the objectives of the Center is to establish dose-relationships in asbestos-induced carcinogenesis, through the statistical evaluation of the data. The program assures that data are being gathered on each subject; that a complete and standardized set of forms is put into use; and that the data are interpreted and disseminated quickly to the investigators.

The Louisville Vinyl Chloride Workers' Cancer Surveillance and Education Project, initiated in 1975 for a three-year period, continues to follow about 1200 vinyl chloride monomer and polyvinyl chloride workers.

The objective of this project is the development of a comprehensive program designed to evaluate the effects of chemical exposure on industrial workers. The project is designed to identify at the earliest possible time potentially harmful chemicals and reduce their exposure-related injuries through the application of the most updated methods of detection and prevention which are now readily available for general application.

The major tasks of the program are medical surveillance of the workers' laboratory screening, and radiological screening programs, functional evaluation of cardiac/pulmonary status, psycho-social rehabilitation program, and a worker education program.

The medical history and physical examinations have been completed on all of the 1,350 employees of the vinyl chloride plant. Over 850 employees had two or more physical examinations. The laboratory screening includes total bilirubin, alkaline phosphatase, serum glutamic-oxaloacetic transaminase (SGOT), serum glutamic-pyruvic transaminase (SGPT), and the gamma glutamyl transpeptidase determination, and, in addition to the above tests, lactic acid dehydrogenase and its isoenzymes, 5' nucleotidase, total protein electrophoresis, immunoglobulins, alpha-2 fetoprotein, carcino-embryonic antigen (CEA), iso-enzymes of alkaline phosphatase, cholesterol, prothrombin time, bromsulfalein and/or indocyanine green dye clearance, hepatitis B surface antigen, anti-hepatitis B surface antigen, blood count, reticulocyte count, platelet count and urine analysis.

The radiological and isotopic studies are performed annually in the high-risk group, based on work and exposure histories, medical and physical examinations.

During the past year, the pulmonary screening program completed tests on 60 of its goal of 250 employees, selected on the basis of exposure to vinyl chloride, smoking history, and duration of employment at the plant. The pulmonary screening program has identified 30 employees who, on chest x-ray, demonstrated mid-zonal pleural thickening; two of these individuals have undergone pleural and lung biopsy for diagnostic evaluation in the hospital. Physiological pulmonary function studies were normal. The etiology of these pleural thickenings and their potential occupational relationship is under active study.

The data bank has compiled all available clinical, biochemical, radiological and physiological study data on all active employees.

During the past year, an education program has been implemented for 1200 workers, their families, and former VC workers and their families. The program includes information dissemination, meetings, and printed material preparation.

Cancer Associated with Ionizing Radiation

Cancer associated with ionizing radiation is largely preventable. The Bureau of Radiological Health (BRH), Food and Drug Administration, DHEW, estimates that 130 million Americans receive diagnostic X-rays yearly.

In addition to increasing the risk of leukemia, it has been established that radiation can induce a number of human cancers, such as skin, thyroid, breast, lung, and bone cancers. This fact, coupled with the studies which suggest a linear-relationship between the amount of radiation received and the somatic and genetic effects of radiation, is cause for DCCR prevention emphasis.

Among the areas for emphasis in the DCCR effort is its program for close monitoring of mammography utilized in mass screening of female populations for breast cancer. In this regard, an interagency agreement was implemented during the past fiscal year with the Bureau of Radiological Health to reduce exposure during mammographic examinations and to improve the image quality. During the next fiscal year, BRH plans to implement the mammography quality assurance program in approximately half of the states and measure exposures from approximately 5,000 X-ray devices. DCCR is providing technical expertise, equipment, and funding for this major effort.

The six Centers for Radiological Physics continue to review dosimetry and act as a resource in consultation and continuing education for medical physicists throughout the country. More than 200 community hospitals are now participating in breast, head and neck, and leukemia and lymphoma treatment networks. The Centers for Radiological Physics have provided reviews of treatment and screening projects, as well as training, consultation, and a quality control program. The Centers for Radiological Physics have also implemented during the past year a program of ultrasound performance and evaluation. This includes development of test protocols, training of appropriate personnel, and demonstration calibrations of diagnostic equipment.

Educational opportunities were expanded for enhancing the contributions of medical physics to the field of cancer diagnosis and treatment. A state-of-the-art workshop on radiation physics aspects was held at the University of Wisconsin and an ultrasound workshop at the Center for Radiological Physics in Pittsburgh.

It is now well established that an association exists between external radiation to the head and neck in infancy or childhood and subsequent development of thyroid carcinoma. Recent evidence indicates that the occurrence of thyroid carcinoma continues to be a significant hazard among many thousands of individuals who received radiation exposure during the period 1940-1960. Exposure of the thyroid to no more than 50 rads in children may be sufficient to induce thyroid abnormalities. Radiation therapy was usually given to shrink a large thymus, enlarged tonsils and adenoid tissue or to treat acne. A conference of experts examined this problem and developed Information for Physicians: Irradiation-Related Thyroid Cancer, DHEW Publication No. (NIH) 77-1120, for wide dissemination to practicing physicians. Education programs are being developed to include acquainting physicians with the situation through national and state medical organizations, health agencies, and the public. Efforts are being developed to use media to encourage possible high-risk persons to be screened. The coordination with the American Cancer Society, the American College of Radiology, the American Medical Association, and the American Hospital Association has been undertaken.

Planned Activities

During the next fiscal year, model types of cancer prevention programs will be implemented in several community settings. These will include comprehensive cancer centers, community-based cancer control programs, and state health departments. The community based cancer centers in New Mexico, Detroit, and Long Island will be implementing active prevention components.

The objectives of these prevention-oriented programs are: 1) the integration of cancer prevention into the health care and educational system; 2) the reduction of cancer impact by education; 3) the dissemination of information and knowledge of chemical carcinogens or carcinogen-suspects to the practicing medical community and the public; and 4) the awareness mechanism for alerting the medical community and the public to the possibilities of avoiding the environmental carcinogens or carcinogen-suspects. A primary prevention program will be tailored to the unique capability of each Center and the needs of the community served. Other activities receiving emphasis will include:

- . Continuing the staff assistance to programs involving medical surveillance of asbestos and vinyl chloride workers.
- . Publishing monographs on recommended control approaches to reducing the risks from 3 additional carcinogenic agents.
- . Utilizing the information gained through the cigarette smoking studies about the general public and health professionals to develop programs that will reduce the incidence of cancer related to smoking.
- . Furnishing to the voluntary and other organizations concerned with cigarette smoking the kinds of knowledge in appropriate form to assist them in their intervention programs.
- . Determining the most effective ways of reaching the medical profession with the knowledge they need in order to make decisions on whether or not to prescribe a suspected carcinogen.
- . Determining the most effective ways of motivating workers and employees in industries to protect them from possible effects of carcinogens.
- . Continuing the emphasis on preventing cancer through quality control and promoting the successful approaches by the Radiologic Physics Centers' Program in improving quality control in the use of radiology in cancer detection and treatment through education and monitoring programs.
- . Developing an approach to establishing a stronger emphasis in environmentally-induced cancers.
- . Continuing to assess the possible opportunities for primary prevention techniques and education programs for the public.
- . Continuing the interagency efforts to establish a cancer information and occupational alert program with the Department of Labor's Occupational Safety and Health Administration (OSHA). Consideration will be given to expanding the educational

materials from a single package addressing all industries to several educational packages that are industry-specific and also targeted at various levels of employment.

1. . Initiating programs in behavioral change and health education.

CONTRACT SUMMARY

1. Title: Interagency Agreement Study of Carcinogenic Effects of Smoking
2. Principal Investigator: Horace Ogden
CDC
1600 Clifton Road
Atlanta, Ga. 30333
3. Performing Organization: Bureau of Health, Education Center
for Disease Control
Public Health Services
Atlanta, Georgia
4. Contract Number: 40001
5. Starting Date: 7/1/73
6. Expiration Date: 6/30/77
7. Objective: The Bureau of Health Education will maintain, evaluate and report on programs, contracts, purchase orders and other appropriate mechanisms to: 1) develop smoking education activities carried on by professional health workers; 2) continue to assess San Diego community organization project; 3) carry on and evaluate the techniques developed for smoking education in schools; 4) evaluate public education programs; and 5) develop a systematic documentation of accomplishments.
8. Proposed Course: In September 1975, a cooperative peer review will be used to analyze progress to date and to possibly set future courses to follow. Advice and recommendations will be given to both sides.
9. Progress: Primary area of work involved 1) two studies on smoking, and 2) development and demonstration of educational programs through various organizations providing public education. Both Adult Prevalence and Health Professional studies were completed. Data on attitudes, beliefs, perceptions, behavioral, etc. aspects affecting smoking in these two groups will be provided to DCCR at the end of this fiscal year. These basic data will then be analyzed and cross-tabbed by DCCR for both formulating future actions and released for study by others. Education programs for areas such as students in elementary and secondary school health programs have been underway throughout the program. This work has been completed during this fiscal year.
10. Significance for Cancer Control Program: To identify, demonstrate and promote preventive methods in the lung and urinary tract.

National Cancer Program Objective: 1 Approaches: 1.1, 1.6
11. Project Officer: Dr. Dorothy Green
12. FY 1977 Funds: No 1977 Funds

GRANT SUMMARY

1. Title: American Health Foundation Cancer Control and Prevention Program
2. Principal Investigator: Dr. Charles Arnold
Health Maintenance Institute
American Health Foundation
1370 Avenue of the Americas
New York, New York 10019
3. Performing Organization: American Health Foundation
New York, New York
4. Grant Number: 1-R18-CA-17867-01
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: Smoking education, motivation and cessation strategy, mini-screening programs for cancer in industry, grade and high school students.
8. Proposed Course: The overall program would comprise the following related elements: (1) an analysis of the effectiveness of cancer detection utilizing a full screening procedure compared with detection through a much simpler prescreen reaching a larger population; (2) implementation of established smoking cessation techniques (cessation by 70% of initial group after five-week program) in demonstration hospital clinics, with additional follow-up for long-term maintenance; (3) application of motivational programs to areas of preventive screening and proper smoking and nutritional habits; and (4) economic studies of the cost effectiveness of prescreening, smoking cessation clinics, and preventive health insurance benefits.
9. Progress: During the first six months logistical arrangements received the major emphasis. These include: (1) A two-stage screening strategy was finalized which will utilize two mini-examinations that include two questionnaires; (2) 153 adults at the union headquarters were screened and the field procedures, including feedback, were pretested; (3) scientific and administrative computer programs have been written for the 17 risk factors to be included in the study; (4) arrangements were initiated with management of the companies whose union members will be screened. All first screening will occur at the company, second screening at the union headquarters.

In addition, nearly 4,000 union members in four companies are being screened to identify high (multiple) risk persons.

By December 1975, 95 children were screened in a Know Your Body (KYB) preliminary trial conducted by a private school in New York City. Concomitantly, preparations were made to commence our formal KYB study protocol in which two pairs of public middle schools (one study school

and one control) would be screened in the KYB program. This involved meetings with parents, teachers and students in all four schools utilizing specific materials to explain the objectives and methods used in KYB. Dates for the screening program have been scheduled in three of the four study schools, and a team consisting of a registered nurse and paramedics has been organized to conduct the screening.

During the period between February and April 1976, 2,500 seventh and eighth grade students in the four study schools were screened.

This program has proceeded according to plan. Results should be available on the first phase of the industry program by the end of this fiscal year.

10. Significance for Cancer Control Program: To promote preventive methods for lung cancer.

National Cancer Program Objective: 1 Approaches: 1.1, 1.3, 1.4

11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$634,110

CONTRACT SUMMARY

1. Title: Third World Conference on Smoking and Health
2. Principal Investigator: Henry Milt
219 East 42nd Street
New York, New York 10017
3. Performing Organization: American Cancer Society, Inc.
4. Contract Number: 35010
5. Starting Date: 6/30/73 6. Expiration Date: 8/29/76
7. Objective: The purpose of this conference was to review the developments of the past few years in all sectors of anti-smoking activity throughout the world.
8. Proposed Course: Contractor provided financial accounting, furnished all necessary labor and materials, and managed the conduct of a working conference.
9. Progress: The ACS, in cooperation with the American Heart Association, American Lung Association, Health Education Council, International Union Against Cancer, National Cancer Institute of Canada, National Clearinghouse of Smoking and Health, National Heart and Lung Institute, National Interagency Council on Smoking and Health, Pan American Health Organization, World Health Organization, and DCCR held a conference in New York City on 2-5 June, 1975. The conference consisted of papers presented in five separate sections. These sections were: (1) health consequences of smoking; (2) modifying the risk; (3) education; (4) cessation activities; and (5) government and social action. Fifty-one countries were represented. Proceedings of Workshop on Modifying the Risk for the Smoker was published by the American Health Foundation.
10. Significance for Cancer Control Program: To provide preventive methods in the lung and urinary tract.

National Cancer Program Objective: C1 Approaches: C1.1, C1.6
11. Project Officer: Dr. Dorothy E. Green
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: Occupational Cancer Information and Alert Program
2. Principal Investigator: Dr. Roger Penn
200 Constitution Avenue
Washington, D.C. 20210
3. Performing Organization: U. S. Department of Labor
4. Contract Number: 06000
5. Starting Date: 6/12/75 6. Expiration Date: 6/11/77
7. Objective: To provide for review of scientific information on occupationally-related cancer and to develop a plan for incorporating the information into an educational program aimed at reducing the incidence of cancer.
8. Proposed Course: A cancer alert film for showing on commercial television is being developed. It is expected to be completed and ready for showing by 1977. Educational materials for five industries are being developed with the goal of training 25,000 to 100,000 workers. The educational projects and the evaluation program are expected to be completed by September 78.
9. Progress: The two year interagency project was initiated in June 1975 and is now into its second year of operation. Five contracts have been let by DOL to accomplish the goals of this program. The first, with the National Academy of Sciences was in two parts. The first part was a review of selected carcinogens to determine the extent of manufacturer and use; the extent to which workers are acquainted with and comprehend the risk of occupational exposure; and to recommend general content, manner of presentation and target audiences. The second task was to conduct a symposium to assure mobilization of the best information on occupational cancer education. The symposium was held in December 1976; the proceedings are to be published by June 1977. The second contract, with George Washington University, is producing a cancer alert film to be shown on commercial television. The film is expected to be ready by early summer 1977. Two contracts--one to develop training materials (Abt Associates); the other to deliver training to 25,000 to 100,000 workers, using material developed by the first contract, (George Washington University). The preparation of materials is to be completed by December 1977, with the training completed by September 1978. The fifth contract (Division Research Institute) provides for an outside evaluation of the Cancer Alert Program.
10. Significance for Cancer Control Program: To develop public information on the control and prevention of cancer.

National Cancer Program Objective: 1 Approaches: 1.4, 1.5

11. Project Officer: Dr. Winfred F. Malone

12. FY 1977 Funds: No 1977 Funds
TQ Funds: \$153,128

CONTRACT SUMMARY

1. Title: A Survey of Exposure to Chemical Carcinogens and Recommended Control and Intervention Programs
2. Principal Investigator: Dr. David P. Discher, Director
Center for Occupational and Environmental
Safety and Health
Stanford Research Institute
Menlo Park, California 94025
3. Performing Organization: Stanford Research Institute
4. Contract Number: 55176
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/77
7. Objective: To identify several key carcinogens which warrant particular control activity and to recommend a practical cancer control and prevention program.
8. Proposed Course: Develop strategies for carcinogens which can be used as models in various activities involved with cancer prevention.
9. Progress: The contractor has developed a work plan using staff and consultants. Stage I Dossiers on 148 chemicals have been prepared. Ninety-eight of these chemicals were selected for preparation of Stage II dossiers. The Dossiers were delivered during the fiscal year to complete Task I. Based on the information provided through Task 1, twenty chemicals were chosen for Task 2 reports. The selection was upon the feasibility of imposing control and/or intervention measures to limit human exposure, as well as the utility of a monograph on the chemical. The reports were completed during the fiscal year. Work on a prototype monograph was carried on concurrently with Task 2. Preparation of monographs for Vinyl Chloride, Asbestos, and Diethylstilbestrol were started between January and July, 1976. Delivery of the completed monographs are expected by June 29, 1977.
10. Significance for Cancer Control Program: Concern for identification and evaluation of practical methods for reducing exposure to carcinogenic agents, reducing exposure of individuals, reducing availability of agents and substitution or modification of agents.

National Cancer Program Objective: 1 Approaches: 1.2
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$366,000

CONTRACT SUMMARY

1. Title: Tyler Asbestos Workers' Study
2. Principal Investigator: George A. Hurst, M.D.
Program Director: Charles G. Spivey, Jr., M.D.
3. Performing Organization: Texas Chest Foundation
4. Contract Number: 45066
5. Starting Date: 6/6/74 6. Expiration Date: 3/31/79 (Renewal)
7. Objective: 1) To make available medical expertise and technology to the affected workers; 2) To implement several diagnostic and early detection techniques; 3) To provide education in the form of consultation and meetings with the workers and their families, especially with regard to smoker education and cessation; 4) To serve as a model demonstration medical surveillance project, involving a well-defined occupationally affected cohort; 5) To develop practical knowledge on asbestos exposure that will assist the Division of Cancer Control and Rehabilitation in the development of preventive strategies in relation to asbestos induced cancer.
8. Proposed Course: The asbestos workers' cohort has been identified by NIOSH employment record lists, and the medical history of the asbestos exposure, smoking history, respiratory symptoms and general health data are being collected. The cohort of 875 persons have been examined every six months through physical examination, chest radiography, sputum cytology, pulmonary function studies, and, in case of indication of early signs of malignancy, bronchoscopy, prophylactic therapy. Hospitalization for management of bronchogenic carcinoma, mesothelioma, or asbestosis has been provided. In case of death, postmortem, gross pathology and histopathology are performed.
9. Performance: From the total identified cohort of 878 workers, 719 are available for these studies. From this group, 567 were examined one time; 484, 399, 313, 217, and 56 were examined twice, three times, four times, five times, and six times respectively. Of the cohort workers, 443 live within a 50-mile radius. The others were examined through 12 outreach clinics. From the group of add-ins numbering 34 and the manpower cohort of 153,178 were examined. From the control group of 350 volunteers, 178 completed the first examination. A total number of 2,993 aerosol sputum specimens, 3,330 spontaneous sputa and 63 lung washings and brushings were examined. Through 964 home visits, the workers and their families had the opportunity to discuss questions about the Tyler Asbestos Workers' Project. Smoking and health education programs were held. Scientific lectures were delivered and the data have been published in four scientific papers.

10. Significance for Cancer Control Program: To identify, demonstrate, and promote preventive methods.

National Cancer Program Objective: 1 Approach: 1.1, 1.3

11. Project Officer: Dr. Winfred F. Malone

12. FY 1977 Funds: \$598,544

CONTRACT SUMMARY

1. Title: Statistical Data Management and Coordinating Center for the Tyler Asbestos Workers' Program
2. Principal Investigator: Vincent Guinee, M.D., Director
Cancer Control and Epidemiology Programs
M. D. Anderson Hospital and Tumor Institute
3. Performing Organization: University of Texas System Cancer Center
M.D. Anderson Hospital and Tumor Institute
4. Contract Number: 65296
5. Starting Date: 9/30/76 6. Expiration Date: 9/29/77
7. Objective: To develop a coordination and statistical management system for correlating laboratory, clinical and epidemiological data pertaining to the Tyler Asbestos Workers' Program (TAWP). To establish dose relationships in asbestos-induced carcinogenesis.
8. Proposed Course: The Data Management and Coordinating Center maintains two separate office facilities; one in Houston, Texas, and the other in Tyler, Texas. The data obtained from TAWP has been grouped in nine data sets, abstracted, keystroked, and entered to tape. A computer-assisted appointment system has been developed, and the activities of the TAWP have been analyzed and the necessary corrections instituted.
9. Progress: The summary data obtained from the TAWP has been analyzed and updated. Five of the nine data sets were entered to tape. The computer-assisted appointment system has been completed, computer program design and coding have been established. The system is now operational.
10. Significance for Cancer Control: To identify, demonstrate, and promote cancer preventive methods.
11. Project Officer: Winfred F. Malone, Ph.D.
12. FY 1977 Funds: \$324,276 TQ
350,000 1977

CONTRACT SUMMARY

1. Title: Implementation and Assessment of a Demonstration Cancer Control, Detection and Prevention Program in a Cohort of Industrial Workers
2. Principal Investigator: Carlo H. Tamburro, M.D.
Associate Professor
University of Louisville Foundation
2301 South Third Street
Louisville, Kentucky 40208
3. Performing Organization: University of Louisville Foundation
4. Contract Number: 55212
5. Starting Date: 6/23/75 6. Expiration Date: 6/23/78
7. Objective: To develop a comprehensive program designed to identify pre-cancerous and cancerous diseases in a cohort of industrial workers. To design the methodology and demonstrate that the program can be implemented in an industrial environment. To identify at the earliest possible time potentially carcinogenic chemicals and reduce their exposure related injury through application of the most updated methods of detection, prevention, treatment and rehabilitation, which are now available for general application.
8. Proposed Course: Development of a comprehensive prototype demonstration model consisting of a medical surveillance and laboratory screening program, radiological screening, health education, counseling and follow-up, and rehabilitation. A data bank was also established containing a master file, verified clinical and laboratory data, and the work history of the cohort. The health education program has developed photographic brochures, a series of health education letters to the workers, specialized educational programs, and meetings for the workers, their families, and the community. Several professional meetings for occupational physicians, epidemiologists, and others associated with vinyl chloride produced liver cancer have also been conducted.
9. Progress: The medical surveillance program covering the present employees of the B. F. Goodrich polyvinyl chloride manufacturing plant in Louisville, Kentucky has been updated, expanded, and implemented. All the employees are examined on a routine basis. The comprehensive laboratory screening program and radiological screening have been performed on all participants. A health education program was developed and implemented for 1,200 workers, their families, and for former VC workers and their families.
10. Significance for Cancer Control Program: Initiate projects designed to mobilize cancer detection facilities and equipment and to make it available to health professionals.

National Cancer Program Objectives: C1

Approaches: C1.1,C1.3

11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$973,725

CONTRACT SUMMARY

1. Title: Mammography Quality Assurance Program
2. Principal Investigator: Mr. Ronald Jans
Food and Drug Administration
Bureau of Radiological Health
12720 Twinbrook Parkway
Rockville, Maryland 20852
3. Performing Organization: Bureau of Radiological Health
Food and Drug Administration
12720 Twinbrook Parkway
Rockville, Maryland 20852
4. Contract Number: 70602
5. Starting Date: 11/1/76 6. Expiration Date: 9/30/78
7. Objective: The Agency is to provide State and local radiological health agencies with program support for the implementation of the Mammography Quality Assurance Program; to make available training for professionals (State surveyors, medical physicists, technologists, radiologists) in quality assurance procedures; and to develop and field test tools for the reduction of unnecessary patient exposure and the improvement of image quality.
8. Proposed Course: Two years. The Bureau of Radiological Health will provide sufficient support for State and local radiological health agencies to implement the Mammography Quality Assurance Program. This will include the following items: (a) dosimetry cards and TLD support for both initial screening and subsequent mailing of TLDs, (b) compilation and analysis of the data, and (c) training of State surveyors by FDA personnel in mammography survey techniques and recommended quality assurance procedures for facilities.
9. Progress: Four States have been surveyed and 12 are being completed. Others will be started during the next fiscal year.
10. Significance for Cancer Control Program: Cancer prevention and detection.
National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$150,000

CONTRACT SUMMARY

1. Title: Coordination Program for Radiological Physics Centers-
2. Principal Investigator: Ms. Mary Louise Meurk
Suite 307
6900 Wisconsin Avenue
Chevy Chase, Maryland 20015
3. Performing Organization: American Association of Physicists in Maryland
4. Contract Number: 45162
5. Starting Date: 6/23/75 6. Expiration Date: 6/23/77
7. Objective: To coordinate the activities of the six regional radiological physics centers.
8. Proposed Course: To continue to coordinate and monitor the Centers for Radiological Physics.
9. Progress: The office is in its third year of acting in a coordinating capacity to the six radiological physics centers. The program maintains communication with centers and is responsible for uniformity activities within the CRPs, establishing guidelines and protocols, and reporting total activities to the Cancer Control Program. Specific activities in year "3" have included: (1) site visits to review activities, finances, facilities, services and education programs at CRPs, (2) coordination meetings to determine the overall direction of the physics program, (3) intercomparison meetings to compare therapy and ionization chambers, phantoms, TLDs, etc. (4) coordinating meetings on evaluation, calibration of secondary standard, and communications, (5) development of workshops and training aids for the education of physicists in community hospitals.
10. Significance for Cancer Control Program: The program has developed an administrative capacity to provide coordination of the Centers for Radiological Physics in their development and maintenance of a comprehensive medical physics review program for the DCCR cancer control programs involving the use of radiation for the detection and treatment of cancer.

National Cancer Program Objective: C1 Approaches: C1.1, C1.5, C1.6
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$104,000

CONTRACT SUMMARY

1. Title: Northeast Center for Radiological Physics
2. Principal Investigator: Dr. John S. Laughlin
Memorial Hospital for Cancer and Allied
Diseases
444 East 68th Street
New York, New York
3. Performing Organization: Memorial Hospital for Cancer and Allied
Diseases
4. Contract Number: 45057
5. Starting Date: 6/28/76 6. Expiration Date: 6/27/77
7. Objective: Establish Radiologic Physics Center to provide radiological
physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It
continues to provide review and monitoring of physics capabilities for
DCCR diagnostic and therapeutic programs throughout the region. This
includes monitoring calibration of radiotherapy units, establishing
protocols. All sites within the region are regularly visited. Also
provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects
of cancer diagnostic and treatment protocols in community hospitals are
equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6

11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$258,854
TQ: \$ 87,373

CONTRACT SUMMARY

1. Title: Mideast Radiological Physics Center
2. Principal Investigator: Dr. Prakash Shrivastava
320 East North Avenue
Pittsburgh, Pennsylvania 15212
3. Performing Organization: Allegheny General Hospital
4. Contract Number: 45148
5. Starting Date: 6/28/76 6. Expiration Date: 6/27/77
7. Objective: Establish Radiologic Physics Center to provide radiological physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It continues to provide review and monitoring of physics capabilities for DCCR diagnostic and therapeutic programs throughout the region. This includes monitoring calibration of radiotherapy units, establishing protocols. All sites within the region are regularly visited. Also provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects of cancer diagnostic and treatment protocols in community hospitals are equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred Malone
12. FY 1977 Funds: \$152,048

TQ: \$ 32,128

CONTRACT SUMMARY

1. Title: Southern Center for Radiological Physics
2. Principal Investigator: Dr. Robert J. Shalek
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: University of Texas System Cancer Center
4. Contract Number: 45150
5. Starting Date: 11/1/76 6. Expiration Date: 10/30/77
7. Objective: Establish Radiologic Physics Center to provide radiological physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It continues to provide review and monitoring of physics capabilities for DCCR diagnostic and therapeutic programs throughout the region. This includes monitoring calibration of radiotherapy units, establishing protocols. All sites within the region are regularly visited. Also provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects of cancer diagnostic and treatment protocols in community hospitals are equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred Malone
12. FY 1977 Funds: \$42,000

CONTRACT SUMMARY

1. Title: Midwest Center for Radiological Physics
2. Principal Investigator: Dr. John R. Cameron
3321 Sterling Hall
475 N. Charter Street
Madison, Wisconsin 53706
3. Performing Organization: Board of Regents, University of Wisconsin
4. Contract Number: 45152
5. Starting Date: 6/28/74 6. Expiration Date: 6/5/77
7. Objective: Establish Radiologic Physics Center to provide radiological physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It continues to provide review and monitoring of physics capabilities for DCCR diagnostic and therapeutic programs throughout the region. This includes monitoring calibration of radiotherapy units, establishing protocols. All sites within the region are regularly visited. Also provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects of cancer diagnostic and treatment protocols in community hospitals are equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$50,277

CONTRACT SUMMARY

1. Title: Northwest Radiological Physics Center
2. Principal Investigator: Dr. Peter Wootton
University Hospital, RC-08
Seattle, Washington 98195
3. Performing Organization: University of Washington
4. Contract Number: 45158
5. Starting Date: 6/28/76 6. Expiration Date: 6/27/77
7. Objective: Establish Radiologic Physics Center to provide radiological physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It continues to provide review and monitoring of physics capabilities for DCCR diagnostic and therapeutic programs throughout the region. This includes monitoring calibration of radiotherapy units, establishing protocols. All sites within the region are regularly visited. Also provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects of cancer diagnostic and treatment protocols in community hospitals are equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$28,768

CONTRACT SUMMARY

1. Title: Southwest Radiological Physics Center
2. Principal Investigator: Dr. William R. Hendee
4200 East Ninth Avenue
Denver, Colorado 90220
3. Performing Organization: University of Colorado Medical Center
4. Contract Number: 45160
5. Starting Date: 6/28/76 6. Expiration Date: 6/27/77
7. Objective: Establish Radiologic Physics Center to provide radiological physics capabilities for ongoing DCCR projects throughout the region.
8. Proposed Course: To eventually become self-sustaining program.
9. Progress: The project is currently in its third year of operation. It continues to provide review and monitoring of physics capabilities for DCCR diagnostic and therapeutic programs throughout the region. This includes monitoring calibration of radiotherapy units, establishing protocols. All sites within the region are regularly visited. Also provided are seminars on pertinent subjects.
10. Significance for Cancer Control Program: Ensuring that physics aspects of cancer diagnostic and treatment protocols in community hospitals are equivalent to that obtainable in major cancer centers.

National Cancer Program Objective: 1 Approaches: 1.1, 1.5, 1.6
11. Project Officer: Dr. Winfred F. Malone
12. FY 1977 Funds: \$107,690
TQ: \$ 49,461



DETECTION, DIAGNOSIS AND PRETREATMENT EVALUATION BRANCH

The Detection, Diagnosis and Pretreatment Evaluation Branch (DDPEB) of the Division of Cancer Control and Rehabilitation is responsible for the reduction of morbidity and mortality from all forms of cancer through the early detection of disease, before metastases have occurred. Prompt diagnostic work-up and thorough pretreatment evaluation permits the administration of the most appropriate therapeutic regimens at a time when treatment has the highest probability of success.

During FY 1977, efforts and resources were concentrated on detection and diagnosis of breast cancer, female pelvic cancer and melanoma. Utilizing both grant and contract mechanisms, other programs were continued that complement these in detection and diagnosis, such as training programs in breast self examination, mammography and thermography, pathology quality control and planning for pathology reference centers. In addition, state-of-the art workshops were conducted in cancer of the cervix and endometrium.

Breast Cancer Detection

Major emphasis was placed on this program since breast cancer is the leading cause of death and disability from cancer in women and the leading cause of death in women aged 35 to 54. It is anticipated that in the United States in 1977 there will be about 90,000 new cases and 34,000 deaths from breast cancer. Early detection of breast cancer appears to be the best means to effect a more favorable prognosis of the disease.

The nationwide Breast Cancer Detection Demonstration Project (BCDDP) co-sponsored by the American Cancer Society and NCI is in its fourth year and will continue to completion through the fifth year for all Projects and an additional follow-up period for five years. This year has been an extremely active year for the BCDDP as a result of the questions raised about the presumed risk for using x-ray mammography for routine screening of women, particularly those less than 50 years of age. A chronology of events pertaining to the questions on mammography are as follows:

- In October 1975, NCI appointed three experts to review potential radiation risks and screening benefits associated with mammography. Preliminary reports received in July 1976, indicated a presumed maximum radiation risk of 1% per rad. The review of benefits derived from the Health Insurance Plan (HIP) study (1963-1968) showed no benefits from screening in the under 50 age group. In August 1976, NCI and ACS in Interim Guidelines to the BCDDP, no longer recommended routine mammographic screening of women below 49 years of age but allowed selection on an individual need basis. By September 1976, all BCDDP had reduced their mid-breast radiation exposure to one rad or less, for a two-view mammographic examination, as was recommended in the preliminary reports.

- In January 1977, a fourth group, the BCDDP Working Group comprised of leading epidemiologists and clinicians first met to determine the scientific information that could be obtained from the current BCDDP and to examine the possible gains in mammography since the 14-year-old HIP study.
- In March 1977, final reports were received from the three expert appointees. These confirmed the preliminary conclusions and, additionally, recommended that NCI "concentrate" its resources in conducting a clinical trial for women over 50 years of age. The presumed risk for a one rad exposure was further refined to indicate a lesser lifetime risk beginning at age 35.
- In late April 1977, Project Directors of the BCDDP, NCI and ACS reviewed screening rates for the months of October through December 1976 and recommended modifications to existing screening guidelines that further limit the use of routine mammography for women 35 through 49. These modifications were independently corroborated by the Cancer Control and Rehabilitation Advisory Committee and limited routine mammography screening of women under 50 to those with a previous history of breast cancer, and/or those having a family history of breast cancer in mother or sisters. Also recommended was that routine screening of women over 50 was to be continued until the report from the Working Group is received and an NIH consensus meeting is held in the second week in September 1977.

Unedited and preliminary data from the BCDDP have shown that 1,656 cancers have been detected and 347 interval cancers have occurred through June of 1976. As of February, 1977, 270,000 women have received an initial screening, 214,457, 86,692, and 11,808 have been screened thus far in years two, three and four, respectively. Of the 1,656 cancers detected by the Projects, 540 (33%) were found in the 35-49 age group and 1,095 (66%) were in women over 50 years of age. Of the total cancers detected, 43% were discovered by mammography alone, 5% by clinical examination alone and 43% by these two modalities combined. Of 161 invasive cancers detected, that were 1 cm or less in diameter, 95 were detected by mammography alone.

Until the NIH consensus meeting on breast cancer screening is held in September, 1977, the BCDDP is continuing routine screening of women over 50 years of age and those 35 to 49 years of age are screened routinely only if they have had a previous personal history of breast cancer or have a mother or sisters who have had breast cancer. Both of these criteria are accepted as significantly high risks to warrant routine use of mammography at this time.

The Branch is also currently supporting a detection demonstration project Evaluation of Thermography in Mass Screening for Breast Cancer to determine whether the use of thermography increases the effectiveness and/or the efficiency of breast cancer screening programs. This program is being jointly conducted by the Health Insurance Plan of Greater New York (HIP) and

The Thomas Jefferson University Hospital. In April 1976 it was decided to stop recruitment of further screenees and phase-out this project in 1977. This decision was based on evidence from this study that the use of thermography, in its present stage of development, does not significantly increase the detection of tumors of the breast when used alone or in combination with physical examination and mammography. Future demonstrations using this technique should await the completion of research showing its medical efficacy and cost-effectiveness. Similarly, the supporting contract, Thermography Technicians Training Program with the University of Oklahoma, provided 28 specially qualified trainees for 18 BCDDP centers in its first two years and will have completed its three-year program within the next six months.

Related to the needs of the 27 BCDDP programs for specially qualified personnel, Mammography Training for the Early Detection of Breast Cancer contracts were established in 1975 with seven medical centers together with a curriculum and evaluation contract, Coordination Center of Mammography Education Programs with the American College of Radiology. Halfway through the projected three-year period for these contracts, 472 physicians and 452 radiologic technologists have received the special training.

The Case/Control Study listed under the title of the Breast Cancer Detection Demonstration Project (BCDDP): Interviewing Contract having concluded a period of training and pre-testing is now fully prepared for the task of collecting risk factor data from all cancer cases identified through the BCDDP. These data are to be compared with matched controls from the BCDDP.

Female Pelvic Cancer Detection

Mortality from uterine cancer has declined 65 percent during the last 40 years. This decline, occurring primarily in cancer of the cervix, is attributed to the wide application of pelvic examinations, Pap tests, better education programs, better hygiene, and other epidemiological factors not clearly understood at the present time. However, despite this dramatic decline in mortality, cancer of the uterus still remained the fourth most frequent cancer killer of women in the United States in 1975. It is estimated from the Third National Cancer Survey data that, in the year 1976, 47,000 new cases of invasive disease will occur and 11,000 deaths from uterine cancer will be reported. When cervical carcinoma in situ is included, the 1976 estimate for new cases is in excess of 87,000.

The National Cancer Act of 1971 with changes made by The National Cancer Act Amendments of 1974 reads:

The Director of the National Cancer Institute shall establish programs as necessary for cooperation with State and other health agencies in the diagnosis, prevention and treatment of cancer including programs to provide appropriate trials of programs of routine exfoliative cytology tests conducted for the diagnosis of uterine cancer.

The above statement is interpreted to require appropriate trials providing for programs of routine exfoliative cytology. These trials should provide information about the frequency with which such test should be conducted and which part of the female population should be included in these screening programs.

Additional answers sought include those pertaining to the setting in which the programs would be more effective and the nature of followup requirements for suspicious and positive smears.

In response to the charge from the Congress, the Division advertised through a Request for Proposal (RFP), and solicited from all State and Territorial Health Departments proposals for the project entitled, Planning or Implementation of Cervical Cancer Screening Program. The specific objectives mandated programs aimed at a reduction of the incidence of, and mortality from invasive cancer of the cervix through Pap testings. These objectives are also in agreement with the concept that those women who will die of invasive cervical cancer are the women who have not availed themselves of screening or early detection techniques prior to the development of invasive disease. It is primarily these women who might best be targeted for screening activities, in order to effect a reduction in morbidity and mortality from cervical cancer. Many statistical studies have revealed that women who die of cervical cancer are more commonly of poverty or low socioeconomic status, more frequently of minority ethnic groups, usually in excess of 40 years of age, and often have been medically underserved, either by reason of nonavailability of services or of the individual's failure to utilize such services. To further the observed decline in cervical cancer mortality, these women at high risk of developing cervical cancer should be encouraged to obtain medical checkups periodically.

In addition to seeking to target screening activities for these women, and thus to effect a further decrease in the morbidity and mortality from cervical cancer, the Cancer Control Program's 35 State and Territorial Cervical Cancer Screening Programs have sought to obtain more insight into several important problems. To date, the programs have screened and analyzed data on 543,612 women. Demographic characteristics and clinical results are collected and computerized for the purposes of evaluation. It is hoped that these programs will reveal answers to several of the following questions:

- What segments of the U.S. population should be screened?
- What are the most effective settings for screening?
- What is the proper followup for a suspicious or positive Pap smear?
- What is the proper interval for testing?

Preliminary analysis of data generated by this program reveals that 47 percent of all women screened were older than age 35 and, therefore, at higher risk of invasive disease. Minority ethnic groups, which represent only 11 percent of the U. S. population, made up 37 percent of all screenings. Women from poverty and low income groups represented 71 percent of those screened, whereas only 3 percent were from high income groups. In addition, 45% of all screenees were classified as rural residents.

Of 2,276 biopsies performed, 1,613 were reported out as abnormal. The number of cancer cases proven is 777, and this represents a minimum as all reports are not complete. The studies to date, therefore, have a yield rate of 14 cases per 10,000 women.

To better understand and meet the needs of a specific high risk group, one project deals with The Cervical Screening of the South West American Indian. Some 42,000 Navajo, Pueblo, and Apache Indian women and 47,000 medically indigent non-Indian women have received cervical screenings under this project. Through the cooperation of the Indian Tribal Councils and Indian Health Services, outreach programs have been conducted and paramedical personnel have been trained to conduct tests and education programs.

Two analytical studies, a contract for Critical Evaluation of Mass Screening for Uterine Cancer and a grant, Screening and Cervical Cancer: A Mathematical Model, are deciphering the relationship of multiple epidemiological, pathological, and personal history factors in the success of screening activities. In the contract for the Critical Evaluation of Mass Screening, twenty years of screening results for one county have been collected and entered into a data base. This information is from a county where mass screening has been widely applied and will be analyzed with state-wide screening and mortality data, which includes counties where mass screening has been far less prevalent. This study will provide information on the effects of mass screening and trends of uterine cancer over a full generation, 1953 to 1978, in a State. The grant will extend present models to track fluctuations in the latent incidence of in situ disease, estimate false negative rates, identify age specific incidences, and investigate the validity of a two disease model for invasive cervical cancer.

Ongoing are two studies to provide enlarged outreach efforts which will lead to the initiation of programs aimed at the enhancement of the care given to patients with malignant trophoblastic disease. Each of two programs entitled, Regional Trophoblastic Disease Center and Model Regional Trophoblastic Disease Program, is located at Duke University and UCLA respectively. A companion program at UCLA, the Gynecologic Oncology Program is designed to augment the UCLA trophoblastic effort and to expand programs for the treatment of patients with gynecologic cancer.

Colorectal Cancer Control

Through a DCCR grant, A Community Based Study of Colorectal Cancer Control, a consortium of ten community hospitals serving twenty counties and 2,600,000 persons in central Michigan, headquartered at Michigan State University, is coordinating radiologists, patients and procedures to improve control of colorectal cancer. Standardized protocols, analyses of data on randomized patients, technical diagnostic procedures and regular semi-annual followup will help evaluate susceptibility, demography, nutritional factors, false negatives and positives. These studies will also help to minimize delays and to improve decisions, diagnoses, economic considerations and professional and public education. During the first year, standardized forms and procedures have been disseminated and 363 patients interviewed.

Multiple Sites

To help disseminate rapidly the latest and best knowledge in diagnostic radiological oncology techniques, procedures, and principles, the American College of Radiology (ACR) contract, Planning for Oncologic Diagnostic Radiology Conferences, completed the planning work of six special committees, with central

coordination by ACR for six regional training conferences. These six diagnostic radiologic oncology workshops were planned, for possible implementation by ACR in FY 1978: (1) Cancer of the lung; (2) Malignancy of the Gastro-Intestinal Tract (Hollow Viscera); (3) Brain Tumor Imaging; (4) Hodgkins' Disease, Lymphoma, Leukemia; (5) Cancer of the Liver, Biliary Tract, Pancreas and Spleen; (6) Cancer of the Kidney, Ureter, Bladder, Prostate, Urethra, Penis and Testes. These will emphasize high quality in the earliest possible detection and diagnosis of cancer in these sites, including the uses of angiography, contrast media, sonography, nuclear medicine, and computerization.

Support by DCCR, through the contract Organized Approach by the Family Physician to the Diagnosis and Management of Selected Forms of Cancer has enabled the American Association of Family Physicians (AAFP) to facilitate, improve, and increase the precision and timeliness of cancer reporting, registration, analysis, and followup for a large number of individual primary physicians, clinics, and community hospitals across the country. This emphasizes the development, implementation, and evaluation of effective guidelines for the earliest cancer diagnosis and the best appropriate management and referral alternatives for the estimated 60,000 family physicians, of whom 33,000 are AAFP members. During the first nine months, over 2,000 physicians had reported nearly 2,000 cancer cases to the Rocky Mountain State Cooperative Tumor Registry.

To ensure the highest possible quality pathology control or review and to provide standardized terminology as well as the best prognostic and treatment implications for all DCCR programs involving pathologic material and diagnoses, the American Society of Clinical Pathologists (ASCP) under contract Developmental Planning For Pathology Reference Centers developed the rationale and plan for nine site-specific pathology reference centers, to be activated in FY 1978. These will be located geographically across the country in regions or centers most appropriate to the active DCCR cancer programs to be served by them, as well as to assist in incorporating pathology control considerations into proposed new programs, under the guidance of a central ASCP coordinating committee. The WHO oncologic classification ICD-0 is the standard for diagnostic terms and review.

Plans

In the coming year, the Detection, Diagnosis and Pretreatment Evaluation Branch will:

- Continue site monitoring, merit reviews, and consultation to all the screening programs.
- Provide assistance in moving several State and Territorial Cervical Screening Demonstration Projects from the planning stage to implementation.
- Continue the development of the Pathology Quality Control System for Breast Cancer Detection Demonstration Projects that was initiated in the last quarter of FY 1976.

- Implement the plan established in the Developmental Planning for Cancer Control Pathology Reference Centers provided by the American Society of Clinical Pathologists by moving into contracts for selected centers. These site-specific Centers will maintain quality control in the appropriate DCCR projects, as well as provide assistance to community hospitals in their respective areas.
- Conduct additional workshops to assess current technology and concepts, benefit/risk factors and cost effectiveness to develop recommendations or proposals for detection-diagnosis programs, especially in the serious problem areas of colorectal bladder cancers.
- Plans are also being advanced to conduct two other workshops, Prostate Cancer and Motivating the Hard-To-Reach. While the first subject falls under the general heading, cancer of the genital organs, the second topic has significance for cancer detection at all sites. In the first case, attempts will be made to delineate the methodology needed for detecting early prostate cancer. The latter is proposed to determine the factors needed for molding positive attitudes toward cancer detection.
- Prototype Network Management Projects Adjunctive to Regional Program in Cervical Cancer Screening is being proposed as a demonstration effort designed to integrate the process starting with cervical cancer detection through pretreatment evaluation. Treatment is seen to form the remainder of the continuum.

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Arthur J. Present, M.D.
2231 E. Speedway Boulevard
Tucson, Arizona 85719
3. Performing Organization: University of Arizona Medical Center
4. Contract Number: 55097
5. Starting Date: 10/9/74
6. Expiration Date: 7/8/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,005 women have been screened and 31 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$330,239

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Lewis W. Guiss, M.D.
University of Southern California
Los Angeles, California 90033
3. Performing Organization: University of Southern California
4. Contract Number: 45098
5. Starting Date: 6/25/74
6. Expiration Date: 8/24/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 9,937 women have been screened and 15 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$375,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Robert J. Schweitzer, M.D.
384 - 34th Street
Oakland, California 94609
3. Performing Organization: Samuel Merritt Hospital
4. Contract Number: 45068
5. Starting Date: 2/25/74
6. Expiration Date: 3/24/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 9,984 women have been screened and 73 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$287,391

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Leslie W. Whitney, M.D.
1200 Jefferson Street
Wilmington, Delaware 19801
3. Performing Organization: Wilmington Medical Center
4. Contract Number: 45047
5. Starting Date: 1/1/74
6. Expiration Date: 11/30/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,067 women have been screened and 83 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$266,246

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Marvin V. McClow, M.D.
Barrs Street & St. Johns Avenue
Jacksonville, Florida 32203
3. Performing Organization: St. Vincent's Medical Center
4. Contract Number: 55210
5. Starting Date: 1/27/75
6. Expiration Date: 1/27/78
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,056 women have been screened and 73 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$271,865

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project

2. Principal Investigator: Robert L. Egan, M.D.
1365 Clifton Road, N.E.
Emory University Clinic
Atlanta, Georgia 30322

A. Hamblin Letton, M.D.
Georgia Baptist Hospital
315 Boulevard, N. E.
Atlanta, Georgia 31312

3. Performing Organization: Emory University and
Georgia Baptist Hospital

4. Contract Number: 55277

5. Starting Date: 6/9/75
6. Expiration Date: 6/8/77

7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.

8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.

9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,083 women have been screened and 88 cancers have been detected.

10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3

11. Project Officer: Richard D. Costlow, Ph.D.

12. FY 1977 Funds: \$290,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Fred I. Gilbert, Jr., M.D.
Alexander Young Bldg., Suite 545
Honolulu, Hawaii 96813
3. Performing Organization: Pacific Health Research Institute, Inc.
4. Contract Number: 45046
5. Starting Date: 12/19/73
6. Expiration Date: 12/18/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,015 women have been screened and 101 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$235,364

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Elisabeth Ward, M.D.
215 Avenue B
Boise, Idaho 83702
3. Performing Organization: Mountain States Tumor Institute
4. Contract Number: 55305
5. Starting Date: 6/25/73
6. Expiration Date: 6/30/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,143 women have been screened and 109 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.
National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$325,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Donald C. Young, M.D.
University and Penn. Avenues
Des Moines, Iowa 50316
3. Performing Organization: Iowa Lutheran Hospital
4. Contract Number: 45067
5. Starting Date: 2/27/74
6. Expiration Date: 8/26/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,167 women have been screened and 22 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$269,853

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Larry H. Baker, M.D.
Rainbow Boulevard and 39th Street
Kansas City, Kansas 66103
3. Performing Organization: University of Kansas Medical Center
4. Contract Number: 55303
5. Starting Date: 6/19/73
6. Expiration Date: 6/18/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,460 women have been screened and 65 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$296,670

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Jerry B. Buchanan, M.D.
601 South Floyd Street
Louisville, Kentucky 40202
3. Performing Organization: Louisville School of Medicine
4. Contract Number: 55307
5. Starting Date: 4/17/73
6. Expiration Date: 6/30/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,219 women have been screened and 84 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.
National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$230,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Barbara Threatt, M.D.
396 West Washington Street
Ann Arbor, Michigan 48109
3. Performing Organization: University of Michigan
4. Contract Number: 45049
5. Starting Date: 1/18/74
6. Expiration Date: 8/17/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 9,976 women have been screened and 86 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.
National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$379,334

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Ned Rodes, M.D.
Business Loop - 70th & Garth Ave.
Columbia, Missouri 65201
3. Performing Organization: Cancer Research Center
Ellis Fischel State Cancer Hospital
4. Contract Number: 45095
5. Starting Date: 6/1/74
6. Expiration Date: 7/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,075 women have been screened and 73 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$363,127

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Benjamin Rush, M.D.
15 South Ninth Street
Newark, New Jersey 07107
3. Performing Organization: College of Medicine and Dentistry
of New Jersey
4. Contract Number: 35006
5. Starting Date: 6/28/73
6. Expiration Date: 10/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,511 women have been screened and 33 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$289,909

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Philip Strax, M.D.
200 Madison Avenue
New York, New York 10016
3. Performing Organization: Guttman Breast Diagnostic Institute
4. Contract Number: 55306
5. Starting Date: 4/18/73
6. Expiration Date: 6/29/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 20,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 17,857 women have been screened and 78 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$440,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Robert McLelland, M.D.
3040 Erwin Road
Durham, North Carolina 27705
3. Performing Organization: Duke University Medical Center
4. Contract Number: 45064
5. Starting Date: 2/15/74
6. Expiration Date: 10/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,065 women have been screened and 50 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$320,886

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Myron Moskowitz, M.D.
Elland and Bethesda Avenues
Cincinnati, Ohio 45267
3. Performing Organization: University of Cincinnati
College of Medicine
4. Contract Number: 55310
5. Starting Date: 6/29/73
6. Expiration Date: 6/30/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,981 women have been screened and 123 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$1,520

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: JoAnn D. Haberman, M.D.
711 Stanton Young Boulevard
Oklahoma City, Oklahoma 73104
3. Performing Organization: University of Oklahoma
4. Contract Number: 55309
5. Starting Date: 6/18/73
6. Expiration Date: 6/18/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,210 women have been screened and 61 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: No 1977 Funds

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Morton J. Goodman, M.D.
1015 N.W. Twenty-Second Avenue
Portland, Oregon 27210
3. Performing Organization: Good Samaritan Hospital and
Medical Center
4. Contract Number: 45088
5. Starting Date: 6/1/74
6. Expiration Date: 7/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 9,964 women have been screened and 78 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$312,891

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator:
Harold J. Isard, M.D.
York and Tabor Roads
Philadelphia, Pennsylvania 19141

Marc Lapayowker, M.D.
3401 N. Broad Street
Philadelphia, Pennsylvania 19140
3. Performing Organization: Albert Einstein Medical Center and Temple University Hospital
4. Contract Number: 45058
5. Starting Date: 1/2/74
6. Expiration Date: 12/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,023 women have been screened and 52 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$274,597

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Bernard Fisher, M.D.
3434 & 3515 Fifth Avenue
Pittsburgh, Pennsylvania 15213
3. Performing Organization: University of Pittsburgh
School of Medicine
4. Contract Number: 45065
5. Starting Date: 2/15/74
6. Expiration Date: 8/14/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,027 women have been screened and 43 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$310,000

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Herbert P. Constantine, M.D.
Rhode Island Hospital
393 Eddy Street
Providence, Rhode Island 02902
3. Performing Organization: Rhode Island Hospital
4. Contract Number: 45096
5. Starting Date: 6/1/74
6. Expiration Date: 7/27/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 9,560 women have been screened and 48 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$290,000
 TO Funds: \$265,910

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: M. Dee Ingram, M.D.
110 21st Avenue South
Nashville, Tennessee 37203
3. Performing Organization: Vanderbilt University Hospital
4. Contract Number: 55099
5. Starting Date: 7/24/74
6. Expiration Date: 7/23/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,086 women have been screened and 39 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$340,000
TO Funds: \$289,914

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Duncan L. Moore, M.D.
2000 Crawford Street
Houston, Texas 77002
3. Performing Organization: St. Joseph's Hospital
4. Contract Number: 55100
5. Starting Date: 10/1/74
6. Expiration Date: 10/31/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,003 women have been screened and 60 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$314,824

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: Thomas Carlile, M.D.
1323 Spring Street
Seattle, Washington 98104
3. Performing Organization: Virginia Mason Medical Center
4. Contract Number: 55304
5. Starting Date: 6/15/73
6. Expiration Date: 6/14/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,204 women have been screened and 104 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: No 1977 Funds

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project

2. Principal Investigator: Bruce Shnider, M.D.
5125 MacArthur Boulevard
Washington, D.C. 20016

3. Performing Organization: Georgetown University Medical Center

4. Contract Number: 45062

5. Starting Date: 2/7/74

6. Expiration Date: 2/6/77

7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.

8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.

9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,126 women have been screened and 39 cancers have been detected.

10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3

11. Project Officer: Richard D. Costlow, Ph.D.

12. FY 1977 Funds: \$313,250

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project
2. Principal Investigator: John R. Milbrath, M.D.
8700 W. Wisconsin Avenue
Milwaukee, Wisconsin 53226
3. Performing Organization: Medical College of Wisconsin
4. Contract Number: 55308
5. Starting Date: 6/18/73
6. Expiration Date: 6/17/77
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer.
8. Proposed Course: This project is jointly funded by NCI and the American Cancer Society. The contractor will, over a 2-year period, examine 10,000 women, without symptoms of breast cancer and rescreen this population annually for 5 years. An additional 5-year follow-up will provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Participants have been enrolled in the detection project as planned and examinations have been performed according to protocol. Non-palpable "early" breast cancers without evidence of metastases form a significant proportion of all cancers detected. As of this writing, 10,185 women have been screened and 95 cancers have been detected.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objective: C2, C3 Approaches: C2.3, C3.3
11. Project Officer: Richard D. Costlow, Ph.D.
12. FY 1977 Funds: \$325,000

CONTRACT SUMMARY

1. Title: Evaluation of Thermography in Mass Screening for Breast Cancer
2. Principal Investigator: Dr. Raymond Fink
625 Madison Avenue
New York, New York 10022
3. Performing Organization: Health Insurance Plan of Greater New York
4. Contract Number: 35021
5. Starting Date: 6/28/73 6. Expiration Date: 12/31/77
7. Objective: To evaluate the contribution thermography may make in increasing the effectiveness of breast cancer screening programs by determining if: 1) thermography can be used in lieu of mammography, 2) thermography increases the rate of breast cancer detection, and 3) thermography can be used to define population groups at high risk of breast cancer.
8. Proposed Course: Twenty thousand women were to be screened by three methods: clinical examination, thermography, and mammography, each modality being evaluated independently. To obtain the study population, random sample of all women aged 45-65 belonging to specified medical groups of HIP were selected. All findings will be reviewed by medical coordinators, who will be responsible for followup medical recommendations. This project is being run in conjunction with Thomas Jefferson University -- N01-CN-35027.
9. Progress: In March 1976 this project was significantly curtailed and it was directed that no new women be entered and that an orderly phase-out and evaluation be instituted by December 31, 1977. Review of the project has indicated that thermography, at its present state of development, cannot be substituted for mammography or physical examination as a tool for the early detection of breast cancer in asymptomatic women. As of March 1976, 18,500 participants had received their initial screening examinations. There were 49 cancers detected from the initiation of the project until the beginning of the phase-out, approximately three per 1,000 women of those receiving screening. The percent recommended for biopsy and the rate of breast cancer detected is somewhat higher than in the HIP mammography study which began in 1963. The final evaluation of this project should resolve the issues on which are based the objectives of this study.
10. Significance for Cancer Control Program: To determine, evaluate, and demonstrate effective methods for control of breast cancer.

National Cancer Program Objective: C4 Approaches: C4.1
11. Project Officers: Richard D. Costlow, Ph.D.; John E. Lane, Ph.D.
12. FY 1977 Funds: \$353,596

CONTRACT SUMMARY

1. Title: Evaluation of Thermography in Mass Screening for Breast Cancer
2. Principal Investigator: Gary Shaber, M.D.
1020 Walnut Street
Philadelphia, Pennsylvania 19107
3. Performing Organization: Thomas Jefferson University
4. Contract Number: 35027
5. Starting Date: 6/28/73 6. Expiration Date: 3/31/78
7. Objective: To evaluate the contribution thermography may make in increasing the effectiveness of breast cancer screening programs by determining if: (1) thermography can be used in lieu of mammography, (2) thermography increases the rate of breast cancer detection, and (3) thermography can be used to define population groups at high risk for breast cancer.
8. Proposed Course: Twenty thousand women were to be screened by three methods: clinical examination, thermography, and xerography, each modality being evaluated independently. To obtain the study population, (women aged 45-64 from a variety of sources) American Cancer Society screenees, Bell Telephone Company employees, etc., were invited to participate. All findings will be reviewed by medical coordinators who will be responsible for follow-up medical recommendations. This project is being run in conjunction with the Health Insurance Plan of Greater New York (N01-CN-35021).
9. Progress: In March 1976 this project was significantly curtailed and it was directed that no new women be entered and that an orderly phase-out and evaluation by March 31, 1978, should be instituted. Review of the project has indicated that thermography, at its present state of development, cannot be substituted for mammography or physical examination as a tool for the early detection of breast cancer in asymptomatic women. As of April 1, 1976, there have been 17,526 women who have received the initial screening examination. There have been 458 biopsies performed relative to 641 requested, resulting in the discovery of 156 cancers. This represents a rate of 8.9 per 1,000 women examined. The final evaluation of this project should resolve the issues on which are based the objectives of this study.
10. Significance for Cancer Control Program: To determine, evaluate, and demonstrate effective methods for control of breast cancer.

National Cancer Program Objective: C4 Approaches: C4.1
11. Project Officers: Richard D. Costlow, Ph.D.; John E. Lane, Ph.D.
12. FY 1977 Funds: No 177 Funds
 TQ Funds: \$433,694

CONTRACT SUMMARY

1. Title: Thermography Technologist Training Program
2. Principal Investigator: Jo Ann D. Haberman, M.D.
Associate Professor of Radiological
Sciences
Health Sciences Center
Oklahoma City, Oklahoma 73190
3. Performing Organization: University of Oklahoma
4. Contract Number: 55163
5. Starting Date: 9/9/74 6. Expiration Date: 1/8/78
7. Objective: To provide training for thermography technicians to ensure obtaining the highest quality thermograms of the breast, thus aiding in diagnosis and detection of breast cancer, sponsored by the DCCR.
8. Proposed Course: This program has been established to provide intensive training for thermographic technicians involved in the 27 NCI-ACS-sponsored Breast Cancer Detection Demonstration Projects (BCDDP). The curriculum and training materials have been developed by the project director, and trainees receive their instructions on a one-to-one basis at the University of Oklahoma. The students receive 15 hours of taped lectures covering six subjects; five hours of lecture on techniques, and 20 hours of practical clinical application of thermographic instrumentation and processing.
9. Progress: During the first year, 19 students from 13 BCDDP centers completed their training. The program as extended served 9 more trainees and 5 more BCDDP centers during the second year and by the expiration date is expected to have trained more than 40 thermographers from all 27 centers.
10. Significance for Cancer Control Program: This centralized program helps to ensure the production of high-quality thermograms in the 27 centers and will provide, to some extent, for comparability of images from center to center. Thermography has diagnostic and demonstration value for breast cancer.

National Cancer Program Objective: C3 Approaches: C3.2

11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$33,000

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Richard H. Gold, M.D.
Professor of Radiology
UCLA School of Medicine
455 Hilgard Street
Los Angeles, California 90024
3. Performing Organization: University of California at Los Angeles
4. Contract Number: 55248
5. Starting Date: 6/27/75
6. Expiration Date: 6/26/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs are directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice, and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this three-year program. Program evaluations are to be conducted in cooperation with the American College of Radiology's Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, coordinated with the American College of Radiology, in terms of objectives, interchange of teaching materials, and quality control. After 18 months of the contract, 97 physicians and 62 technologists have been trained. Acquiring core teaching materials from ACR delayed initiation and full implementation, but 200 physicians and 275 technologist trainees are expected by the end of the third year.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objective: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$95,000

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Robert Egan, M.D.
Professor of Radiology
Emory University
School of Medicine
Atlanta, Georgia 30322
3. Performing Organization: Emory University Medical Center
4. Contract Number: 55179
5. Starting Date: 6/20/75
6. Expiration Date: 6/19/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs shall be directed primarily toward the training of radiologists who have completed their residency requirements and who are engaged in practice, and radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this three-year program. Program evaluations are conducted in cooperation with the American College of Radiology's Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, in cooperation with the American College of Radiology's Coordination Committee in terms of objectives, interchange of teaching materials, and quality control. As of December 1976, 18 months after initiation of the contract, 59 physicians and 59 radiologic technicians have been trained. Acquiring core teaching materials from ACR delayed initiation and full implementation, but 200 physicians and 275 technologist trainees are expected by the end of the third year.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objectives: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Rita Girolamo, M.D.
Professor of Radiology
New York Medical College
5th Avenue and 106th Street
New York, N. Y. 10029
3. Performing Organization: New York Medical College
4. Contract Number: 55249
5. Starting Date: 6/27/75 6. Expiration Date: 6/26/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs are directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this 3-year program. Program evaluations are to be conducted in cooperation with the American College of Radiology (ACR) through its Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, coordinated with the American College of Radiology in terms of objectives, interchange of teaching materials, and quality control. After 18 months of the contract, 110 physicians and 113 technologists have been trained. Acquiring core teaching materials from ACR delayed initiation and full implementation, but 200 physicians and 275 technologist trainees are expected by the end of the third year.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objective: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$110,000

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Harold Isard, M.D.
Chairman, Division of Radiology
Albert Einstein Medical Center
York & Tabor Streets
Philadelphia, Pennsylvania 19141
3. Performing Organization: Albert Einstein Medical Center
4. Contract Number: 55246
5. Starting Date: 6/27/75 6. Expiration Date: 6/26/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor has developed course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs shall be directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of the three-year program. Program evaluations are conducted in cooperation with the American College of Radiology's Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, in cooperation with the American College of Radiology's Coordination Committee, in terms of objectives, interchange of teaching materials, and quality control. Eighteen months after initiation of the contract, 66 physicians and 59 radiologic technicians have been trained. Acquiring core teaching materials from American College of Radiology delayed initiation and full implementation, but 200 physicians and 275 technologist trainees are expected by the end of the third year.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 29 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objectives: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: No FY 1977 Funds

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Gerald Dodd, M.D.
Professor of Radiology
University of Texas Systems Cancer Center
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: M. D. Anderson Hospital
4. Contract Number: 55250
5. Starting Date: 6/28/75 6. Expiration Date: 6/27/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physician examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs are directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this three-year program. Program evaluations are to be conducted in cooperation with the American College of Radiology (ACR) through its Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, coordinated with the American College of Radiology, in terms of objectives, interchange of teaching materials, and quality control. After 18 months of the contract, 94 physicians and 41 radiologic technicians have been trained. Despite initial delays in acquiring core teaching material, 200 physicians and 275 technologist trainees are expected by the end of the contract.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objective: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$110,000

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: John Milbrath, M.D.
The Medical College of Wisconsin
561 N. 15th Street
Milwaukee, Wisconsin 53233
3. Performing Organization: The Medical College of Wisconsin
4. Contract Number: 55247
5. Starting Date: 6/27/75
6. Expiration Date: 6/26/78
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs shall be directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this three-year program. Program evaluations are to be conducted in cooperation with the American College of Radiology's Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, coordinated by the American College of Radiology (ACR), in terms of objectives, interchange of teaching materials, and quality control. After 18 months of the contract, 20 physicians and 51 technologists have been trained. Acquiring core teaching materials development has resulted in a delayed implementation, but 200 physicians and 275 technologist trainees are expected by the end of the third year.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objective: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: No FY 1977 Funds

CONTRACT SUMMARY

1. Title: Mammography Training for the Early Detection of Breast Cancer
2. Principal Investigator: Margaret Abernathy, M.D.
Assistant Professor of Neurology
Georgetown University
37th and O Streets, N.W.
Washington, D.C. 20007
3. Performing Organization: Georgetown University Medical School
4. Contract Number: 65251
5. Starting Date: 7/1/75
6. Expiration Date: 1/31/79
7. Objective: To expand the capabilities of health professionals, both participating radiologists and technicians, for performing breast cancer screening examination, utilizing the techniques of physical examination, mammography, and thermography.
8. Proposed Course: The contractor develops course plans and curricula, recruits trainees, and develops new or expands existing educational programs for the training of radiologists and radiology technicians in mammography, specimen radiography, and clinical examination of the breast. The programs are directed primarily toward the special training of radiologists who have completed their residency requirements and who are engaged in practice, and of radiologic technicians supporting practicing radiologists. Fifty physicians and 75 technicians were to be trained during the first year of this three-year program. Program evaluations are to be conducted in cooperation with the American College of Radiology (ACR) through its Coordinating Committee.
9. Progress: The contractor has developed and implemented a mammography training program for physicians and radiologic technicians, coordinated with the American College of Radiology in terms of objectives, interchange of teaching materials, and quality control. The average annual rate for trainees is expected to be 70 physicians and 91 technicians. Delay in acquiring materials and developing programs has resulted in a delayed implementation, and extensions, but 127 physician and 175 technologist trainees are expected by the end of 1977.
10. Significance for Cancer Control Program: An upsurge of interest and demand, stimulated by the 27 Breast Cancer Detection Demonstration Projects, for expertise in the application of screening techniques is being met by the training of appropriately qualified physicians and technicians.

National Cancer Program Objective: C2, C3 Approaches: C2.5, C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$75,000

CONTRACT SUMMARY

1. Title: Coordination of Mammography Education Program
2. Principal Investigator: Richard Lester, M.D.
Professor of Radiology
The Hermann Hospital
1203 Ross Sterling
Houston, Texas 77030
3. Performing Organization: American College of Radiology
4. Contract Number: 55177
5. Starting Date: 6/6/75
6. Expiration Date: 9/28/77
7. Objective: The ACR provides for management, coordination and evaluation of the seven mammography training centers being sponsored by the DCCR, including curricular content and quality control.
8. Proposed Course: The ACR functions are being accomplished through the efforts of a "Mammography Education Program Coordination Group" (MEPCG) comprised of experts in radiology, pathology, surgery, radiation, physics, thermography, educational methodology and analysis of educational programs. The MEPCG shall be responsible for: (1) assisting the training centers in the development and implementation of the training programs; (2) assessing the objectives and methodologies employed in the training programs; (3) assisting with the procurement and exchange of teaching materials; and (4) assisting the NCI project officer with the monitoring of the educational programs.
9. Progress: The MEPCG has met by itself and also conducted a joint meeting of the MEPCG and the project directors of the seven training programs in September 1975. Coordination and communications have subsequently ensured complete delivery of core teaching materials, workable standardization of methods of testing and evaluation, and mutual sharing of problem solutions and improvements. A complete set of Mammography Teaching Materials was shipped to the Petrov Research Institute of Leningrad by DCCR in cooperation with the Office of International Affairs, NCI.
10. Significance for Cancer Control Program: This effort will help to ensure the highest standards and quality of training in methods for the early detection of breast cancer.

National Cancer Program Objective: C3, C4 Approaches: C3.2, C4.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$207,000
TQ Funds: \$186,929

CONTRACT SUMMARY

1. Title: Breast Cancer Detection Demonstration Project:
Interviewing Contract
2. Principal Investigator: Ms. Corine Kyle
1101 State Street
Princeton, New Jersey 08540
3. Performing Organization: Total Research Corporation
4. Contract Number: 65178
5. Starting Date: 6/20/76 6. Expiration Date: 6/19/79
7. Objective: To determine and demonstrate the relative efficacies, singly and in combination, of patient history, physical examination, mammography (both film and xeroradiography) and thermography in detecting occult breast cancer. To collect risk factor data from all cancer cases identified through the Breast Cancer Detection Demonstration Project based on a comparison with controls.
8. Proposed Course: To provide an assessment of the impact of the program on breast cancer morbidity and mortality.
9. Progress: Special analyses were performed to define the most productive and effective mode for collection of the data. The final outcome recommended the personal interview as the most effective and reliable mode for data collection. During the period April to December 1976, activities were conducted to develop, test and perfect project procedures. These activities include not only a limited trial pre-test, but also a training of the interviewers to assure that all data would be collected in a standardized and consistent manner. The interviewing will commence by mid-1977.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the detection of breast cancer during the early stages of development.

National Cancer Program Objectives: C4 Approach: C4.1
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$91,464

GRANT SUMMARY

1. Title: Teaching Techniques for Breast Cancer Detection
2. Principal Investigator: Ned Rodes, M.D.
Cancer Research Center
Business Loop
70 Garth Avenue
Columbia, Missouri 65202
3. Performing Organization: Cancer Research Center
4. Contract Number: 1 R18 CA 1 8306-01
5. Starting Date: 9/1/75 6. Expiration Date: 8/31/77
7. Objective: The primary aim of this project is to maximize use of an operational Breast Cancer Detection Demonstration Project as a teaching resource. Emphasis will be placed on development of a small-scale training model with follow-up to determine the impact of such training.
8. Proposed Course: To provide instructions to physicians, nurses, and x-ray technologists in the techniques for the early detection of breast cancer, placing emphasis on thermography, mammography, and physical examination.
9. Progress: The proposed training course has entered the implementation phase. The needed expertise in the techniques of breast cancer detection are represented in the selected staff. The entire senior staff of the Radiology Department and the Radiology residents take rotation in this teaching program, each receiving instruction in the several areas of breast cancer detection.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.2, C3.1
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No FY 1977 Funds

GRANT SUMMARY

1. Title: Breast Examination and B.S.E. Training Program
2. Principal Investigator: Josephine E. Newell, M.D.
Breast Cancer Demonstration Project
3040 Erwin Road
Durham, North Carolina 27705
3. Performing Organization: Duke University
4. Grant Number: 1 R18 CA19601-01
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/80
7. Objective: To instruct 300 North Carolina Public Health Nurses over a period of four years in procedures for breast examination and to teach techniques of breast self-examination to patients at state cancer detection centers.
8. Proposed Course: The project will involve training one or two nurses at a time for two days at the breast cancer detection project at Duke University Cancer Center. They would then return to the 60 state cancer detection centers and practice these examinations and teach B.S.E. Records of patients examined, B.S.E. instructions completed, referrals made and cancers detected will be kept for reporting and analysis.
9. Progress: The project planned to train 80 nurses in the first year and will actually train 90. By July 1, 1977 one-third of the counties in the state will have been covered with one or more trainees in each. There is full backing and cooperation by the State Health Division and the American Cancer Society. A manual of procedures and a training brochure have been prepared. The State Nursing Association has evaluated and approved the project and given 16 points for nurses who complete the training course. Excellent public acceptance has followed a 30 minute TV show on a Public Education channel featuring a nurse instructor and a professional model demonstrating breast examination and B.S.E. using a "Betsy" simulator.
10. Significance for Cancer Control Program: Training of nurses and women in breast cancer detection techniques is a significant activity supportable by the NCI and a successful demonstration in North Carolina could set an example for similar programs in other States or regions.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.3, C3.3
11. Project Officer: John E. Lane, Ph.D.
12. FY 1977 Funds: \$42,309

GRANT SUMMARY

1. Title: Digital Computerized Mammographic Enhancement
2. Principal Investigator: Roberta L. A. Kirch
Memorial Hospital for Cancer and Allied Diseases
1275 York Avenue
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied Diseases
4. Contract Number: 1 R18 CA18309 01A1
5. Starting Date: 6/30/77
6. Expiration Date: 6/29/79
7. Objective: Provide continuous updating of technical information to health professionals on principles and method/techniques of cancer diagnosis and pretreatment evaluation. To determine if more recent techniques can increase the accuracy and specificity of film mammography, thereby resulting in earlier diagnosis of breast cancer.
8. Proposed Course: To conduct a prospective study of post-mastectomy patients and patients with biopsy proven diagnosis of pre-malignant disease by comparing film mammograms with digital computer enhancement of the mammograms. To also include histo-pathologic correlation of enhancement and mammographic findings and a retrospective study to correlate various enhancement mammographic and histological findings.
9. Progress: Grantee's progress report expected after the updating of this report.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.
National Cancer Program Objective: C3, C4 Approaches: C3.2, C4.1
11. Project Officer: John E. Lane, Ph.D.
12. FY 1977 Funds: \$77,000
 TQ Funds: \$42,220

CONTRACT SUMMARY

1. Title: Pathology Quality Control System for Breast Cancer Detection Demonstration Project
2. Principal Investigator: William H. Hartmann, M.D.
Department of Pathology
Nashville, Tennessee 37232
3. Performing Organization: Vanderbilt University
4. Contract Number: 65373
5. Starting Date: 5/30/76 6. Expiration Date: 5/29/80
7. Objective: Improve quality control of diagnostic and staging activities in the Breast Cancer Detection Demonstration Projects.
8. Proposed Course: Implement evaluation and quality control standards and provide ongoing monitoring of the pathology reviews in the 27 Breast Cancer Detection Demonstration Projects.
9. Progress: Review of histologic materials to provide adequate quality control is being accomplished by three levels of case review.
 - (A) 27 Project Pathologists review all local cases
 - (B) 8 Regional Pathologists review
 - (C) Central Review Committee - final review

The Central Committee has met once in Nashville. Both the detailed (4 page) pathology form and the transmittal form have been approved and are ready for printing.
10. Significance for Cancer Control Program: To determine and demonstrate effective methods for the correct diagnosis of breast cancer during the early stages of development.

National Cancer Program Objective: C3 Approaches: 3.2
11. Project Officer: James E. Hamner III, D.D.S., Ph.D.
12. FY 1977 Funds: \$116,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: F. S. Wolf, M.D.
State Office Building
Montgomery, Alabama 36104
3. Performing Organization: Alabama Department of Health
4. Contract Number: 55090
5. Starting Date: 5/1/75
6. Expiration Date: 3/31/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Alabama Department of Public Health began cervical cancer screening in selected rural counties, beginning May 1975. After an initial start in three rural counties, the program has expanded into previously unscreened counties. Thirty-four of Alabama's 67 counties are now covered with screening operations. The sought-after population was characterized as low-income or indigent women 35 years of age and older, not having had a recent Pap test. Such a population is being reached, since 50% of the screenees report that they have never had a pap test, have not had one in the last two years, or do not remember having had one. Of the more than 22,000 screenings, all have been rural, and 90% have fallen below the poverty level for Alabama. Age distribution of the screened population has shown 69% to be older than 35, 15% over age 65, and 53% over age 45. The racial composition was 70% white and 30% non-white, a number reflective of the state ratios. The rate of suspicious or positive was 5.3 per thousand.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$275,000
TQ Funds: \$397,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Suzanne Dandoy, M.D.
1740 W. Adams Street
Phoenix, Arizona 85007
3. Performing Organization: Arizona State Department of Health
4. Contract Number: 65283
5. Starting Date: 6/30/76
6. Expiration Date: 6/29/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Arizona Cervical Cancer Screening Program, begun in June 1976, was designed to involve two counties, Pinal and Pima. The planned activities have placed a primary emphasis on the expansion of existing cervical cancer screening programs. Special attention was directed to the screening of women at significant risk of disease, including those who have never had or have not recently had a Pap test. The projected screening target is designated at 13,500 for the first year. Facilities used in the screening have included the Health Department and independent clinics located in and near Pinal and Pima counties. To date the procedures for outreach and for follow-up are fully developed and are being tested for their effectiveness. Those plans and procedures which seemed ineffective were discarded, and those securing the desired results were reinforced and incorporated as the standard operating procedures. This screening program has given considerable thought and effort to follow-up. In this regard, they have devised a sophisticated flow sheet which will ensure a final outcome on every woman screened.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$300,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Ruth Steinkamp, M.D.
Arkansas Department of Health
4815 West Markham
Little Rock, Arkansas 72201
3. Performing Organization: Arkansas Department of Health
4. Contract Number: 55205
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Arkansas Cervical Cancer Screening Program began in May 1975, and now involves 111 participating clinics. Their "high-risk" population has been specified as: (a) indigent groups and (b) those with no prior Pap, with a total projected screening target of 37,000 through year 02. Facilities to be used in screening include health departments and family planning centers. Included in planned outreach are news media, posters, and outreach workers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date numbered 41,088 women, of whom 44% are non-white and 13% of all first-smear recipients were over age 50. The rate of suspicious/positive smears reported is 0.4% overall.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$245,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Elfriede Fasal, M.D.
2151 Berkeley Way
Berkeley, California 94704
3. Performing Organization: State of California
Department of Health
4. Contract Number: 55263
5. Starting Date: 6/30/75 6. Expiration Date: 12/29/77
7. Objective: To evaluate, demonstrate and promote those modalities for community-based cervical cancer screening which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurance of quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted, with evaluation of cost-effectiveness and cost-benefit of the program.
9. Progress: The California Cervical Cancer Screening Program began in June, 1975 and now involves a portion of the state with a current count of 12 participating clinics. During the first 15 months, the program screened 11,494 women. There were twice as many women in poverty and more in older and minority groups among the screenees than in the California population. Positive Pap test results occurred most frequently among women aged 25-34 and over 65. Highest proportions of suspicious or positive results were in the poverty group. Nine percent of screenees never had a Pap test before. The most effective outreach methods were news media, contacts by health department staff and word-of-mouth referral.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 77 Funds

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Michael Baggish, M.D.
79 Elm Street
Hartford, Connecticut 06115
3. Performing Organization: State of Connecticut Department of Health
4. Contract Number: 45074
5. Starting Date: 6/24/74
6. Expiration Date: 8/31/76
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Connecticut Cervical Cancer Screening Program began in June 1974 and involved 7 cities. Connecticut specified as their "high-risk" population as: (a) indigent groups, (b) minority groups and (c) women over 40. Connecticut projected screening totals of 20,000 the first year and 40,000 the next. They received a 13-month extension for the first year's screening. Facilities used in screening included hospitals, health departments, family planning centers, mobile units, and independent centers. Included in planned outreach were news media, posters, and volunteer outreach workers. Rescreening, definitive diagnosis, and follow-up were contractual requirements. The program concluded on August 1976 after two years of screening.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.
TO Funds: \$11,225

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Carol B. Steiner, R.N.
Georgia Department of Human Resources
618 Ponce de Leon Ave., N.E.
Atlanta, Georgia 30334
3. Performing Organization: Georgia Department of Human Resources
4. Contract Number: 55204
5. Starting Date: 6/15/75
6. Expiration Date: 12/15/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Georgia Cervical Cancer Screening Program, now in the second year, has expanded its program to three health districts. Georgia specified their "high-risk" population as: (a) indigent groups and (b) women over 45 with a total projected screening target revised to 9,000 this year. Facilities to be used in screening include health departments and family planning centers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The target population is being reached as evidenced by the statistic showing that 65% of the women screened are 45 years of age or older. Thirty-one percent are non-white; a majority of all women screened are rural. The suspicious and positive rate is 0.5%. The emphasis on evaluation of the screening approaches is beginning to pay dividends in terms of delineating the characteristics of effective recruitment. Recruitment efforts are more successful when the screening services are held in more familiar surroundings, rather than in the community at large.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$141,209

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Kleona Rigney, M.D.
P. O. Box 3378
Honolulu, Hawaii 96801
3. Performing Organization: Cancer Center of Hawaii
4. Contract Number: 65369
5. Starting Date: 9/30/76 6. Expiration Date: 4/31/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurance of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Hawaii cervical cancer screening project was awarded an implementation contract after one year of planning. Screening activities have been initiated on three islands, with a concentration of 12 fixed sites on Oahu. Hawaii characterized their "high-risk" population as: (a) low income, (b) certain defined high-risk groups, and (c) women over 30 years of age who have never had a Pap smear. Those not having a Pap test for two years or more are included in the last category. Projected screening target was set at 30,000 for year 01. Facilities to be used in screening include hospitals, health departments, and mobile units. Included in the planned outreach are news media, posters, and outreach workers. Rescreening, definitive diagnosis and follow-up are contractual provisions.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No FY 1977 Funds
TO Funds: \$429,133

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: C. Hernandez, M.D.
275 East Main Street
Frankfort, Kentucky 40601
3. Performing Organization: State of Kentucky Department of
Human Resources
4. Contract Number: 45083
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Kentucky Cervical Cancer Screening Program began in June 1974 and now involves 117 participating clinics. Kentucky specified their "high-risk" population as: (a) indigent groups and (b) women over 40. They have projected a total screening target of 25,000 this year with a final total of 47,000 for the 3-year period. Facilities to be used in screening include health departments and mobile units. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date numbers approximately 45,200 women, of whom 6% are non-white and 76% are over 40. This contract year approximately 20,000 women have been screened and the rate of suspicious/ positive smears was reported as 2.2%.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Soffy Botero, M.D.
1532 Tulane Avenue
New Orleans, Louisiana 70140
3. Performing Organization: Charity Hospital of Louisiana at
New Orleans
4. Contract Number: 45080
5. Starting Date: 6/28/74
6. Expiration Date: 10/5/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: Louisiana Cervical Cancer Screening Program began in June 1974, and based at Charity Hospital in New Orleans, Louisiana, specified their "high-risk" population as: (a) indigent women over 40 years of age; they have projected a total screening target of 30,000 this year. They have detected 233 cases characterized as suspicious or positive, a rate of approximately 1.0%. Rescreening, definitive diagnosis, and follow-up were required by contract.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No FY 1977 Funds
TQ Funds: \$180,731

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Masao Kumangai, M.D.
Office of the High Commissioner
Saipan, Mariana Islands 96950
3. Performing Organization: Trust Territory of the Pacific
Health Services Department
4. Contract Number: 55168
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Mariana Islands Cervical Cancer Screening Program began in May 1975 and involves 8 participating clinics. The Mariana Islands specified their "high-risk" population as women with no prior pap history with a total screening target of 4,500 this year and 9,000 for next year. Outreach efforts are a major part of the program in order to reach women on out islands spread over an area the size of the United States. Additionally, there are difficulties centered around the language barriers and cultural differences of the various districts. The obstacles to outreach have been surmounted, primarily using these techniques which are uniquely suited to the situation. The results have been commendable. The screened population to date has surpassed the estimated goals by at least 2,000 recruits. Ninety-eight percent are non-white, and approximately 29% over age 40. Rescreening, definitive diagnosis, and follow-up are contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.
National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$184,124

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: E. A. Sawada, M.D.
Division of Cancer Control
201 W. Preston Street
Baltimore, Maryland 21201
3. Performing Organization: Maryland Department of Health and
Mental Hygiene
4. Contract Number: 55166
5. Starting Date: 5/1/75
6. Expiration Date: 1/31/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Maryland Cervical Cancer Screening Program began in March 1975 and involves 19 participating clinics. Maryland specified their "high-risk" population as: (a) indigent groups and (b) women with no recent pap history. Women from these two groups comprised 68% of those screened to date. Projected screenings were 20,000 women for the year. The current reports have shown them to be nearing the 50% mark, and nearly on schedule. Facilities to be used in screening include hospitals, health departments, and mobile units. Included in planned outreach are news media and posters. Rescreening, definitive diagnosis, and follow-up are contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$340,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: J. C. Lashof, M.D.
Suite 450
535 W. Jefferson
Springfield, Illinois 63761
3. Performing Organization: Illinois Department of Public Health
4. Contract Number: 55082
5. Starting Date: 1/15/75
6. Expiration Date: 3/31/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and followup care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Illinois Cervical Cancer Screening Program began in January 1975 and involved 16 participating subcontractors. Illinois specified their "high risk" population as indigent groups with a total projected screening target of 9,000 during the 01 year, and 17,500 for the 02 year. Facilities used in screening included hospitals, health departments, family planning centers and mobile units. The American Cancer Society was utilized for outreach efforts. Rescreening, definitive diagnosis, and followup were contractual requirements. The Illinois program concluded in March 1977. A final report and summary will be submitted later on in 1977.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$52,265

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: J. L. Isbister, M.D.
State of Michigan Department of
Public Health
3500 North Logan Street
Lansing, Michigan 48914
3. Performing Organization: Michigan Cancer Foundation
4. Contract Number: 45076
5. Starting Date: 6/28/74 6. Expiration Date: 12/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Michigan Cervical Cancer Screening Program began in June 1974 and now involves a portion of the state (areas in or near Detroit) with a current count of 137 participating clinics. Michigan specified their "high-risk" population as: (a) indigent groups and (b) women with no prior Pap history. They have projected a total screening target of 45,000 for year 02 and 03. Forty-seven percent belong to either poverty or low-income categories. Facilities used in screening include hospitals, health departments, mobile units, and independent centers. Included in planned outreach were news media, posters, and outreach workers. Rescreening, definitive diagnosis, and follow-up were contractual requirements. The screened population to date numbers approximately 50,000 women, of whom 53% are non-white and 44% are over 40.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objectives: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert Bowser, Ph.D.
12. FY 1977 Funds: \$213,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Loren R. Leslie, M.D.
717 S. E. Delaware Street
Minneapolis, Minnesota 55440
3. Performing Organization: Minnesota Department of Health
4. Contract Number: 55264
5. Starting Date: 6/30/75
6. Expiration Date: 12/29/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Minnesota Cervical Cancer Screening Program began in June 1975 and now involves three participating agencies. Minnesota specified their "high-risk" population as (a) indigent groups, (b) women over 40 and (c) women who are sexually active. They have projected a total target of 60,000 Paps through the 02 year. A total of 29,000 at-risk women were screened during the 01 year, yielding 99 cases of clinically diagnosed cervical cancer. As the most significant cytopathology was demonstrated in the younger lower income groups (ages 15-40), emphasis was shifted to these groups. Those at high risk because of no prior Pap history remained as a major part of the target group. Facilities used in screening included hospitals, family planning centers, and mobile units. Support from the American Cancer figured in their out-reach programs. Rescreening, definitive diagnosis, and follow-up remained as contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$327,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Durward L. Blakey, M.D.
2423 North State Street
Jackson, Mississippi 39205
3. Performing Organization: Mississippi State Board of Health
4. Contract Number: 45086
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Mississippi Cervical Screening Program began in June 1974 and now involves 87 participating clinics. Mississippi specified their "high-risk" population as: (a) low-income groups, (b) women with large families and (c) women with early and frequent sex and activity. They have projected a target of 42,000 through the 02 year. Facilities used in screening included health departments and family planning centers. Support from the American Cancer Society figured in outreach programs. Rescreening, definitive diagnosis, and follow-up are all contractual requirements. The cervical cancer screening program for Mississippi began operation in an area (the State) that was virtually unscreened. The level of high risk was demonstrated during one quarter where the suspicious/positive rate was determined to be 6%. The screened population to date numbers approximately 26,000 women of whom 53% are non-white and 59% are over age 40.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Robert S. Grant, M.D.
1003 O Street
Lincoln, Nebraska 65808
3. Performing Organization: State of Nebraska Department of Health
4. Contract Number: 45081
5. Starting Date: 6/28/74
6. Expiration Date: 8/31/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Nebraska Cervical Cancer Screening Program began in June 1974 and now involves 79 participating clinics. Nebraska specified their "high-risk" population as: (a) indigent and lower-income groups and (b) women with no recent pap history. They have projected a total target of 24,000 for year 01 and 24,000 for year 02. The screened population to date numbers approximately 27,000 women, of whom 18% are non-white and 11% are over age 40. The rate of suspicious/positive smears reported is 1.2%. Facilities to be used in screening include hospitals, health departments, and mobile units. Rescreening, definitive diagnosis, and follow-up are contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 Funds.
10 Funds: \$166,56

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: John Carr, M.D.
505 East King Street
Carson City, Nevada 89710
3. Performing Organization: Nevada State Department of Health
4. Contract Number: 65262
5. Starting Date: 9/2/75 6. Expiration Date: 9/1/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Nevada Cervical Cancer Screening Program began in September 1975 and has provided screening in 12 of 15 rural Nevada counties. Nevada has a total projected screening target of 36,000 through the 02 year. Facilities used in screening included hospitals, health departments, and mobile units. Included in planned outreach are news media and posters. Rescreening, definitive diagnosis, and follow-up remain contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$130,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Peter Greenwald, M.D.
84 Holland Avenue
Albany, New York 12208
3. Performing Organization: Health Research, Inc.
4. Contract Number: 45091
5. Starting Date: 6/28/74 6. Expiration Date: 6/31/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The New York Cervical Cancer Screening Contract began in June 1974 and involved 8 subcontractors as the program drew to a close. New York specified their "high risk" population as: (a) indigent groups, (b) women over 35 and (c) women with no recent pap history; they projected a total screening target of 79,900 for the final year. Facilities used in screening included hospitals and health departments. Included in planned outreach are volunteer outreach workers. Rescreening, definitive diagnosis, and follow-up were contractual requirements. The New York program will be concluded in June 1977 after a three-year period of screening. A final report and statement summarizing the findings of the program are required upon completion of the project.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.
11. National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$294,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Van Hugllin, M.D.
North Dakota Department of Health
Bismark, North Dakota 58501
3. Performing Organization: North Dakota Department of Health
4. Contract Number: 65370
5. Starting Date: 10/1/76
6. Expiration Date: 3/30/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The North Dakota Cervical Cancer Screening Program began in October 1976 and now involves seven participating clinics. North Dakota specified their "high-risk" population as: (a) low-income groups and (b) women 35 years of age or older. They have projected a target population of 9,150 for the 01 year and approximately 18,000 during the 02 year. Facilities to be used include mainly family planning clinic sites. Rescreening, definitive diagnosis, and follow-up are all contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No FY 1977 Funds
TQ Funds: \$175,382

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Aileen Mackenzie, M.D.
450 E. Town Street
P. O. Box 118
Columbus, Ohio 43216
3. Performing Organization: State of Ohio Department of Health
4. Contract Number: 45079
5. Starting Date: 6/28/74 6. Expiration Date: 7/30/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Ohio Cervical Cancer Screening Program began in June 1974 and involves a portion of the state with a current count of 22 participating clinics. Ohio specified their "high-risk" population as: (a) women over 40 and (b) women with no prior pap history. Facilities to be used in screening included hospitals, health departments and family planning centers. During the past year, new program emphasis has been directed toward follow-up, evaluation, and outreach. The emphasis also included workshops and continued efforts to increase the number of screening clinics. Included in planned outreach are media, posters, and outreach workers. Provisions for rescreening, definitive diagnosis, and follow-up remain contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$213,000
 TO Funds: \$276,376

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: James W. Smith, M.P.H.
N. E. 10th and Stonewall
Oklahoma City, Oklahoma 73105
3. Performing Organization: Oklahoma State Department of Health
4. Contract Number: 45077
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Oklahoma Cervical Cancer Screening Program began in June 1974 and now involves 92 participating clinics in 68 of the 77 counties. Oklahoma specified its "high-risk" population as: (a) medium-indigent groups and (b) women over 35. Oklahoma attained the projected screening target of 104,000 last year and projected 108,000 for the 03 year. Oklahoma's target for their first-year screening was 60,000. Heavy emphasis was placed on cervical cancer screening of American Indians and other minorities. Facilities to be used in screening include health departments, family planning centers, mobile units, and independent centers. Included in planned outreach are news media, posters, and outreach workers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date has exceeded 185,000 women, of whom 27% are non-white and 30% are over age 40. This contract year, of which 10 months have passed, approximately 73,000 women have been screened and the rate of suspicious/positive smears reported is 2.8%.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.
National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: R. Martinez, M.D.
Puerto Rico Department of Health
Santurce, Puerto Rico 00809
3. Performing Organization: Puerto Rico Department of Health
4. Contract Number: 55075
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Puerto Rico Cervical Cancer Screening Program began in June 1975 and now involves 6 participating clinics. Puerto Rico specified their "high-risk" population as lower socioeconomic groups who have never had a Pap smear or could not remember having had one. They projected a total screening target of 5,000 for the 01 year and 40,000 during the 02 year. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date numbers approximately more than 18,000 women. Emphasis on outreach has intensified during the past year, and new methods were devised to measure the impact of the new initiatives in recruitment. Similarly, some additional efforts were mounted to assure adequate numbers of trained cytotechnologists, including a program for continuing education in the area of cytotechnology. The program has satisfied the major contract requirements for rescreening, definitive diagnosis, and follow-up care.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$206,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Howard Hutchings, M.P.H.
South Dakota State Department
of Health
Pierre, South Dakota 27501
3. Performing Organization: South Dakota State Department
of Health
4. Contract Number: 55164
5. Starting Date: 4/1/75
6. Expiration Date: 10/31/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The South Dakota Cervical Cancer Screening Program began in April 1975, and now involves 3 participating clinics. South Dakota specified their "high-risk" population as: (a) indigent groups and (b) women with no recent pap history. The projected screening target of 7,200 were reduced during the year to 3000. The request for a reduction in quotas stemmed from an overestimation of the need for screening, as well as from the level of cooperation provided by community health agencies. In all other respects, the contract remains unchanged with the standard requirements for rescreening, definitive diagnosis, and follow-up.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Alan Hinman, M.D.
344 Cordell Hull Building
Nashville, Tennessee 37219
3. Performing Organization: State of Tennessee Department of Public
Health
4. Contract Number: 45085
5. Starting Date: 6/28/74
6. Expiration Date: 1/31/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Tennessee Cervical Cancer Screening Program began in June 1974 and involved 85 participating clinics. Tennessee specified their "high-risk" population as: (a) indigent groups and (b) women from rural areas; they have a total projected screening target of 21,000 for the 01 year and 12,500 for the 02 year. Facilities used in screening included hospitals, health departments and family planning centers. Included in planned outreach are news media and posters. Rescreening, definitive diagnosis and follow-up are contractual requirements. The screened population to date numbers approximately 43,000 women, of whom 18% are non-white and 60% are over age 40. During 1977 the Tennessee program will be concluded, having screened well over their assigned quotas. A summary statement and final report will be submitted later in 1977.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.
National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$192,000 wedge-period funds; no 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: C. R. Yerwood, M.D.
1100 W. 94th Street
Austin, Texas 78756
3. Performing Organization: Texas State Department of Health
4. Contract Number: 45078
5. Starting Date: 6/27/74 6. Expiration Date: 6/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Texas Cervical Cancer Screening Program began in June 1974 and now involves 68 participating clinics. Texas specified their "high-risk" population as: (a) indigent groups and (b) minority groups with a total projected screening target of 24,000 for this the final year. Facilities to be used in screening include family planning centers and mobile units. Included in planned outreach are outreach workers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population during the 03 year numbers approximately 18,000 women of whom 67% are non-white and 14% are over age 40. The Texas program has screened more than 45,000 and has excellent potential for meeting its three-year goal of 51,000.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 Funds

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Lyman Olsen, M.D.
44 Medical Drive
Salt Lake City, Utah 84113
3. Performing Organization: Utah Department of Social Services
4. Contract Number: 65365
5. Starting Date: 6/30/76
6. Expiration Date: 6/30/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Utah Cervical Cancer Screening Program began in June 1976, and now involves 102 participating clinics. Utah specified their "high risk" population as (a) low socioeconomic groups and (b) women without a Pap test within the past year. They projected a total screening target of 20,000 for the 01 year. Facilities to be used in screening include hospitals and health departments. Included in the planned outreach are news media, posters, and outreach workers. Outreach literature in Spanish will be used to effectively communicate with the Spanish-speaking segment of the target population. Rescreening, definitive diagnosis and follow-up are contractual requirements. The totals after three months of screening numbered 5,062 and the rate of positive smears was 0.3%.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$295,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: William C. Maret, M.D.
2600 Bull Street
Columbia, South Carolina 29201
3. Performing Organization: South Carolina Department of Health
and Environmental Control
4. Contract Number: 45084
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The South Carolina Cervical Cancer Screening Program began in June 1974, and now involves 22 participating clinics. South Carolina specified their "high-risk" population as indigent groups with a total screening target of 10,000 during the 02 year and 15,000 for the final year 03. Facilities to be used in screening include hospitals and health departments. Included in planned outreach are news media, posters, and outreach workers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date numbers more than 8,000 women, of whom 23% are non-white and 57% are over age 40.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Roberta A. Coffin, M.D.
115 Colchester Avenue
Burlington, Vermont 05401
3. Performing Organization: Vermont Department of Health
4. Contract Number: 65368
5. Starting Date: 9/30/76 6. Expiration Date: 4/30/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Vermont Cervical Cancer Screening Program began in September 1976 and has plans to establish clinics at strategic points in the state. Vermont specified as their "high-risk" population: (a) women over 35 years of age and (b) women from low-income groups. The projected target population was overestimated and had to be adjusted to attainable goals. The revised target population is approximately 6,000 for the 01 year. Facilities planned for use in the screenings include hospitals and health departments. Outreach efforts will include news media, posters and outreach workers. Rescreening, definitive diagnosis, and follow-up are contractual requirements.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1,C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$200,000*

*Wedge Period Funds

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: Robert S. Jackson, M.D.
Department of Health
Richmond, Virginia 23219
3. Performing Organization: Commonwealth of Virginia
Department of Health
4. Contract Number: 55165
5. Starting Date: 6/30/75 6. Expiration Date: 1/31/78
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high-risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Virginia Cervical Cancer Screening Program began in May 1975 and now involves 14 participating clinics. Virginia specified their "high-risk" population as women not receiving an annual Pap with a total projected screening target of 35,000 through the 01 year. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population to date numbers approximately 26,000, ranging in age from 14 to 80 with an average age of 37 years. The positive rate is approximately 0.1% exclusive of the suspicious smears. Sixteen percent of the screened population had no prior Pap testing.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$216,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: John A. Beare, M.D.
Department of Social and Health Services
Mail Stop 444
Olympia, Washington 98504
3. Performing Organization: Washington State Department of Social
and Health Services
4. Contract Number: 55265
5. Starting Date: 6/30/75 6. Expiration Date: 10/5/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress: The Washington Cervical Cancer Screening Program began in June 1975 and now involves 7 participating counties. Washington specified their "high-risk" population as: (a) indigent groups and (b) women with no recent pap history with a total projected screening target of 8,000 for the 02 year and 14,000 for the final year. Facilities to be used in screening include health departments, family planning centers, mobile units and independent centers. Included in planned outreach are news media, posters, and American Cancer Society volunteers. Rescreening, definitive diagnosis, and follow-up are contractual requirements. The screened population after eight months of activity approaches the target number of 8000 women, of whom 2.2% have had suspicious or positive smears. Studies to analyze the characteristics of the screened population are in progress. The emphasis is on demographic characteristics.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: No 1977 funds.
TO Funds: \$90,000

CONTRACT SUMMARY

1. Title: State Cervical Cancer Screening Program
2. Principal Investigator: H. S. Parrish
State Office Building
Cheyenne, Wyoming 82001
3. Performing Organization: Wyoming State Department of Health
4. Contract Number: 65261
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/77
7. Objective: To evaluate, demonstrate, and promote those screening modalities which are practical and effective in reducing the morbidity and mortality from cervical cancer.
8. Proposed Course: To establish/expand cervical exfoliative cytology screening programs with special emphasis on the woman at "high risk" of disease, including provisions for annual rescreening. Requires definitive diagnosis on suspicious or positive Pap smears and assurances of arrangements for quality therapeutic, rehabilitative, and follow-up care. Individual case data is submitted for the purposes of evaluating the cost-effectiveness and cost-benefit of the program.
9. Progress:
The Wyoming Cervical Cancer Screening Program began in June 1976 and involves clinics in three counties. A program was designed to establish new, and expand existing cervical cancer screening programs with special emphasis on women at "high-risk": (a) women over 35 years of age, (b) low-income and poverty groups, and (c) women without a Pap test in the last year. Included in the planned outreach are news media, posters, and outreach workers. Where appropriate, the screening nurse and outreach worker are bilingual for purposes of reaching a large segment of the non-English-speaking target. In one target area 50% of women screened are Spanish-American. Rescreening, definitive diagnosis and follow-up are contractual requirements. This contract recently implemented gave projected screenings of 6,000 for the 01 year and 9,000 for the 02 year.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high-risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.1, C2.4
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$200,000

CONTRACT SUMMARY

1. Title: Cytological Demonstration Project for Southwest American Indian Population
 2. Principal Investigator: Dr. Scott W. Jordan
School of Medicine
Albuquerque, New Mexico 87106
 3. Performing Organization: The University of New Mexico
 4. Contract Number: 45071
 5. Starting Date: 3/15/74
 6. Expiration Date: 3/14/77
 7. Objective: To determine, demonstrate and promote practical and effective modalities for cervical cancer screening in Navajo Indians and a defined population of medically indigent non-Indians. To determine the significance of the various degrees of dysplasia as risk factors in cervical cancer. To educate paramedical personnel in the conduct of the programs; educate and motivate presumably high-risk individuals to participate in the program.
 8. Proposed Course: This project will be accomplished in cooperation with the Indian Tribal Councils and the Indian Health Services of the P.H.S. The contractor will provide for cervical cancer screening and all data management. Coordination, education, and liaison will be provided by Tribal representatives. Treatment, rehabilitation, and continuing care will be provided by the agency responsible for the Indians' medical care.
 9. Progress: This project is in its third year of operation. It is providing, in cooperation with the Indian Tribal Councils and Indian Health Service, an outreach program for screening Navajo Indians and medically indigent non-Indians. Through 1976, smears have been obtained on a total of 91,436 patients, all of whom are separate individuals. Demographic data was organized to reflect the age-specific cancer rates for three ethnic groups served by the program. This data was formally presented at a cervical screening workshop sponsored by the Interagency Coordinating Committee of Cancer Control and Rehabilitation on September, 1976. Data given for the categories of cancer in situ and invasive carcinoma encompassed ages 20-70+ years for three ethnic groups--Indian, Spanish, and Anglo-Black.
 10. Significance for Cancer Control Program: To determine, demonstrate, and promote effective methods for cervical cancer control and to correlate various stages of cellular dysplasia with risk of developing cancer.
- National Cancer Program Objectives: C2, C3 Approaches: C2.1, C2.3, C2.6
11. Project Officer: Robert T. Bowser, Ph.D.
 12. FY 1977 Funds: No 77 Funds

CONTRACT SUMMARY

1. Title: A Critical Evaluation of Mass Screening for Uterine Cancer
2. Principal Investigator: William Christopherson, M.D.
University of Louisville
School of Medicine
Louisville, Kentucky 40201
3. Performing Organization: University of Louisville
School of Medicine
4. Contract Number: 45059
5. Starting Date: 2/1/74
6. Expiration Date: 1/31/79
7. Objective: To identify, document, and follow all new cases of cancer of the uterus occurring in Jefferson County, Kentucky; to study the relationship of multiple factors in relation to screening activity; to study changing patterns of stage to mortality and to study rate trends of uterine carcinoma, over a full generation.
8. Proposed Course: To determine retrospectively and prospectively the impact of a successful community Pap screening program on uterine cancer morbidity and mortality over a full generation from 1953 to 1978.
9. Progress: Data collection, disc-coding, and staging has been completed for the years 1953 through 1974. New cases for 1975 are being determined from all laboratories and hospitals as well as death certificates; such data is presently undergoing data processing. Cytologic correlation of these cases is completed by Dr. Christopherson. This investigator has published the results of his study of morbidity and mortality trends of cervical cancer in Jefferson County from 1953 through 1974 in Cancer, Vol. 38, p. 1357 (1976). During this 21-year period, the greatest success in screening was with the below-45 age group and these were mostly in the low socioeconomic group. The greatest decrease in cancer incidence and death was in women under 50. Women in their 30's and 50's benefited most from this screening project.
10. Significance for Cancer Control Program: To assure that practical and effective cancer detection knowledge and methods/techniques and resources are available to the public (especially populations at high risk) and are used by health professionals providing medical services to the public.

National Cancer Program Objectives: C2, C3 Approaches: C2.2, C2.3
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$45,000

GRANT SUMMARY

1. Title: Screening and Cervical Cancer: A Mathematical Model
2. Principal Investigator: Arthur Albert, Ph.D.
Boston University
Department of Mathematics
264 Bay State Road
Boston, Massachusetts 02215
3. Performing Organization: Boston University
4. Contract Number: 1 R18 CA 17807-01
5. Starting Date: 6/1/75 6. Expiration Date: 5/31/78
7. Objective: To extend and develop mathematical models relating to the yearly incidences of in-situ cancer and invasive cervical cancer to mortality from the disease, yearly at-risk population and screening rates. To track fluctuations in the latent incidences and to investigate the validity of a two-disease model for invasive cervical cancer.
8. Proposed Course: To extend the existing mathematical models in an effort to address still unanswered questions related to screening programs and their impact on mortality, the natural history of cervical cancer, the implications of screening programs aimed at volunteers versus those who do not volunteer.
9. Progress: A model has been formulated to allow for the statistical estimation procedures for determining the natural history of cervical cancer in a studied population. This natural history of certain cervical cancers has been elucidated by this model. The model also has served as an instrument for an assessment of the impact of screening.
10. Significance for Cancer Control Program: Provides for an updating of technical information on cancer detection principles, methods, and techniques.

National Cancer Program Objective: C2 Approaches: C2.2
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$50,444

GRANT SUMMARY

1. Title: Regional Trophoblastic Disease Center
2. Principal Investigator: Charles B. Hammond, M.D.
Duke University
P. O. Box 3143
Durham, North Carolina 27710
3. Performing Organization: Duke University
4. Contract Number: 1 R18 CA 19272-01
5. Starting Date: 6/30/76
6. Expiration Date: 6/29/79
7. Objective: This project proposes to expand the regional center concept to demonstrate the usefulness of educational efforts through meetings, conferences, seminars, and publications as a means to aid community physicians in the treatment for trophoblastic disease.
8. Proposed Course: To establish a referral center and to provide consultation and an expanded HCG radioimmunoassay service for physicians managing patients with trophoblastic disease. Also to provide consultation in relation to the review of the histopathology and its contribution for diagnosis and support of the chemotherapy regimen.
9. Progress: The regional program for trophoblastic disease has provided in excess of 3,000 radioimmunoassays for a population of 300 patients suspected to have trophoblastic disease. More than 2,000 consultations have been provided for physicians treating such patients leading to the successful treatment of more than 100 patients with trophoblastic disease.
10. Significance for Cancer Control Program: To assure that practical and effective cancer diagnosis and pretreatment evaluation are available to be used by health professionals providing medical care to the public.

National Cancer Program Objective: C2,C3,C3.2 Approaches: C2.2,C2.3
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$82,000

GRANT SUMMARY

1. Title: Model Regional Trophoblastic Disease Program
2. Principal Investigator: Paul C. Morrow, M.D.
Women's Hospital
1240 North Mission
Los Angeles, California 90033
3. Performing Organization: University of Southern California
4. Contract Number: 1 R18 CA 20749-01
5. Starting Date: 2/1/77
6. Expiration Date: 1/31/80
7. Objective: This project proposes to expand the regional center concept to demonstrate the usefulness of educational efforts through meetings, conferences, seminars, and publications as a means to aid community physicians in the treatment for trophoblastic disease.
8. Proposed Course: To establish a referral center and to provide consultations and services for physicians managing patients with trophoblastic disease. To offer consultation in relation to the review of the histopathology and its contribution to diagnosis and to support of the selected chemotherapy regimens.
9. Progress: The acquisition of staff is nearing completion and the groundwork is being laid for the introduction of a trophoblastic disease center for the entire West Coast. The initial efforts include the recruitment of the community hospitals and their participation.
10. Significance for Cancer Control Program: To assure that practical and effective cancer diagnosis and pretreatment evaluation are available for use by health professionals providing medical care to the public.

National Cancer Program Objective: C2,C3 Approaches: C2.2., C2.3, C3.2
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$35,497

GRANT SUMMARY

1. Title: Gynecologic Oncology Program
2. Principal Investigator: Philip J. Disaia, M.D.
University of Southern California
1240 North Mission Road
Los Angeles, California 90033
3. Performing Organization: University of Southern California
4. Contract Number: 1 R18 CA 20501-01
5. Starting Date: 2/1/77 6. Expiration Date: 1/31/80
7. Objective: To establish capabilities in the diagnosis and treatment of gynecological malignancies, and to mount an active program for the selective management of preinvasive disease. To conduct an active multidiscipline program of basic science and clinical research and to develop a teaching program designed to improve the ability of health professionals in the recognition and treatment of gynecological malignancies.
8. Proposed Course: To provide for an outreach program to the community consisting of community night clinics (porta-pap clinic), the maintenance of an abnormal pap test screening clinic staffed by trained paramedics servicing some 1,500 patients per year, and a trophoblastic disease clinic for consultation referral. To establish an in-patient service for the care of the patient with gynecological cancer including a well-staffed surgical unit, chemotherapeutic protocols, an efficient team endeavor including radiotherapy, and beginning trials in immunotherapy.
9. Progress: The plans for staffing and the acquisition of personnel are in the final stages. The planning for the expanded interaction with the community is progressing. The proposed program calls for increased interchange with community hospitals, using the seminar format as the primary mode.
10. Significance for Cancer Control Program: To assure that practical and effective cancer diagnosis and pretreatment evaluation are available for use by health professionals providing medical care to the public.

National Cancer Program Objective: C2, C3 Approaches: C2.2, C2.3
C3.2
11. Project Officer: Robert T. Bowser, Ph.D.
12. FY 1977 Funds: \$44,565

GRANT SUMMARY

1. Title: A Community Based Study of Colorectal Cancer Control
2. Principal Investigator: James E. Potchen, M.D.
Professor of Radiology
Michigan State University
East Fee Hall
East Lansing, Michigan
3. Performing Organization: Consortium of Ten Community Hospitals
in East Lansing, Lansing, Flint,
Farmington and Grand Rapids, Michigan
4. Grant Number: 1 R18 CA 18871 01, 02, 03
5. Starting Date: 6/1/76
6. Expiration Date: 5/31/79
7. Objective: Identify and improve information base for decision making in colorectal cancer in community hospitals; secondarily to test validity of information and correlations with decisions, to improve reliability and specificity of barium enema procedures, and to appraise cost-effectiveness of alternative procedures.
8. Proposed Course: Patient data will be collected first, then education on protocol, process and techniques will be carried out, actual barium and other procedures completed, all will be re-evaluated by six-months follow-ups on the randomized patients. Susceptibility and epidemiology patterns, nutritional factors, diagnostic delays, relative accuracy of diagnoses and decisions and economic alternatives will be studied by multivariants analysis technique in this community hospital demonstration which may provide broader application to other clinical areas. This study will help lead to early detection and presumably improved cure rates for colorectal carcinoma in local communities. The information gained will be used to educate physicians and patients to enhance cancer control. The established radiology network serves ten community hospitals of differing sizes, serving five cities representing 20 counties containing 2,600,000 persons in central Michigan, an area about one-third rural.
9. Progress: The first year's work has not yet been completed, establishing the network of information, cooperation, procedures, and entering the patients into the system. More definitive reports on correlations, analyses, larger number of patients and follow-up evaluations will come later.
10. Significance for Cancer Control Program: To coordinate regional community hospitals and radiologists in providing improved, statistically analyzed diagnosis and widened public and professional education in colorectal cancer.

National Cancer Program Objective: C2; Approaches: 2.1,2.2,2.3,2.6

11. Project Officer: Chauncey G. Bly, Ph.D., M.D.

12. FY 1977 Funds: \$142,000

CONTRACT SUMMARY

1. Title: Early Detection and Diagnosis of Cutaneous Malignant Melanoma
2. Principal Investigator: Thomas B. Fitzpatrick, M.D.
32 Fruit Street
Boston, Massachusetts 02114
3. Performing Organization: Massachusetts General Hospital
4. Contract Number: 55225
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/77
7. Objective: To demonstrate and evaluate the effectiveness of early clinical detection of cutaneous malignant melanoma through a professional education program.
8. Proposed Course: Since very few funds have been expended, it is proposed to use the present contract funds to implement the newly designed program.
9. Progress: The preliminary design for both professional and public education materials have been developed. 160,000 households have received these materials in four test cities. A mass media campaign was planned and was ready for implementation. Following the outcome of a final merit review, only the professional educational aspects of this project were selected for implementation. The initial design was abandoned, following an initial unfavorable merit review and site visit. The contractor has recognized the problem and has striven to follow the review suggestions. An update of the professional educational materials (atlas, clinical/histopathological slides, etc.) will be performed and geared toward a general practitioner audience.
10. Significance for Cancer Control Program: To identify, demonstrate, and evaluate detection and preventive methods.

National Cancer Program Objective: C2, C3 Approaches: 2.1, 2.2, 3.2
11. Project Officer: James E. Hamner, III, D.D.S., Ph.D.
12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Planning for Oncologic Diagnostic Radiology Conference
2. Principal Investigator: Arthur J. Present, M.D.
University of Arizona Medical Center
1515 N. Campbell
Tucson, Arizona 85724
3. Performing Organization: American College of Radiology
4. Contract Number: 65364
5. Starting Date: 4/19/76 6. Expiration Date: 4/19/77
7. Objective: To develop six State-of-the-Art Conferences and Training Workshops in diagnostic radiology covering areas/sites needing special emphasis.
8. Proposed Course: The American College of Radiology will establish planning committees, including a chairman and panelists that will meet and design six Workshop /State-of-the-Arts Conferences in critical areas for the improvement of diagnostic radiology.
9. Progress: The chairmen and members of six committees were appointed and have met for the planning of six workshop/state-of-the-art conferences in diagnostic radiology, to be held in 1977-78:

Cancer of the Lung: Reginald Greene, M.D., Chairman
Malignancy of the Gastro-Intestinal Tract (hollow-viscera):
 H. Joachim Burhenne, M.D., Chairman
Hodgkins' Disease, Lymphoma (non-Hodgkins'), leukemia:
 Ronald A. Castellini, M.D., Chairman
Brain Tumor Imaging: Juan M. Tavaras, M. D., Chairman
Cancer of the Liver, Biliary Tract, Pancreas, and Spleen:
 Manuel Viamonte, M.D., Chairman
Cancer of the Kidney, Ureter, Bladder, Prostate, Urethra, Penis,
 and Testis: Ruben Koehler, M.D., Chairman
10. Significance for Cancer Control: Improved radiologic diagnostic information and techniques would benefit cancer diagnosis, detection, and control programs.

National Cancer Program Objectives: C4 Approaches: C4.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: No FY 1977 Funds

CONTRACT SUMMARY

1. Title: An Organized Approach by the Family Physician to the Diagnosis and Management of Selected Forms of Cancer.
2. Principal Investigator: Joseph E. Johnston, M.D.
Chairman, Cancer Program
American Academy of Family Practitioners
1740 W. 92nd St.
Kansas City, Mo. 64114
3. Performing Organization: American Academy of Family Practitioners (AAFP)
4. Contract Number: CN 65060
5. Starting Date: 3/11/76
6. Expiration Date: 9/10/77
7. Objective: To develop, to implement, and to evaluate the effectiveness of guidelines for the family practitioner on early diagnosis and currently acceptable treatments of cancer and to stress appropriate patient referral alternatives, especially to improve care of patients not now receiving modern management.
8. Proposed Course: To invite, involve and educate as many of the estimated 60,000 general practitioners and 33,000 members of the AAFP in a coordinated program of cancer reporting and follow-up. Better cancer diagnosis, control, evaluation and treatment, reporting materials and evaluation resources for follow-up and analysis will be developed.
9. Progress: Invitations were published in publications received by 45,000 general practitioners. Protocols, reporting forms and communications channels have been established, and in the first six months, over 2,000 physicians had reported nearly 2,000 cases of cancer to the Rocky Mountain States Cooperative Tumor Registry.
10. Significance for Cancer Control: More than one-fourth of primary physicians are general practitioners and first see an estimated one-third of patients in this country, providing great potential opportunities for first diagnoses and reporting of cancer, for local or referral diagnostic and therapeutic procedures, thus being on a major front-line of cancer control.

National Cancer Program Objectives: C3 Approaches: C3.2

11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
12. FY 1977 Funds: \$29,000

GRANT SUMMARY

1. Title: Cancer Control Program for Family Practitioners
2. Principal Investigator: Carmault B. Jackson, Jr., M.D.
M. D. Anderson Hospital and Tumor
Institute
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: University of Texas System Cancer Center
4. Grant Number: 1 R18 CA19460-01
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/79
7. Objective: To provide training in cancer control procedures, on an elective basis, for physicians enrolled in family practice residencies at M.D. Anderson and at seven community hospitals.
8. Proposed Course: Residents will spend two months at M. D. Anderson rotating through four services with emphasis on early detection of cancer and management of the patient in his home community. Conferences and seminars and an annual two-three day cancer control program at the community hospitals will be sponsored by M. D. Anderson and the Texas Academy of Family Physicians. Thirty-six residents will be involved during the first year and 60 during the following two years.
9. Progress: During the first year the project has been mainly concerned with efforts to interest family physicians in attending the four-six week course at M. D. Anderson. A strong "selling" campaign has been developed to accomplish this. Sixty physicians have been enrolled so far. A brochure has been produced announcing the program to assist in recruitment. A need for expertise in management practices has been felt and steps to fill this need have been initiated.
10. Significance for the Cancer Control Program: Professional education of family physicians, who practice in areas remote from large cancer centers, in cancer control concepts is an important endeavor. The M. D. Anderson complex is an ideal base for this effort and advantage should be taken of this resource.

National Cancer Program Objective: C1, C2, C3, C5 Approaches: C1.2,
C2.3, C3.3, C5.3
11. Project Officer: John E. Lane, Ph.D.
12. FY 1977 Funds: \$262,000

CONTRACT SUMMARY

1. Title: Developmental Planning for Cancer Control Pathology Reference Centers
 2. Principal Investigator: Edward Gall, M.D.
American Society of Clinical Pathologists
2100 W. Harrison Street
Chicago, Illinois 60612
 3. Performing Organization: American Society of Clinical Pathologists
(ASCP)
 4. Contract Number: 65238
 5. Starting Date: 1/22/76 6. Expiration Date: 9/30/77
 7. Objective: To develop and define a network of pathology reference centers, including coordination, to assist in providing the highest quality control in anatomic pathology for diagnosis, staging and initiating proper treatment, wherever appropriate, among all DCCR contracts and grants, except the Breast Cancer Detection Demonstration Program (BCDDP).
 8. Proposed Course: To develop full-time staff, headquarters, central design, network of centers distributed equitably around the country and standardize terminology and review procedures.
 9. Progress: Permanent staff and a Central Coordinating Committee of outstanding pathologists were established early in the year, the former located conveniently in the Washington office of the ASCP, and the latter meeting monthly in Washington. Several other major tasks were accomplished during the first year: (1) inventory and study of all DCCR programs (except BCDDP, which has its own pathology control group), including proposed new programs as well as those phasing out; (2) wide-spread consultation with other American pathologists, especially those already locally involved in various DCCR programs; (3) the studied decision to develop Site-Specific Reference Centers (rather than "mini-Armed Forces Institutes of Pathology"; and (4) the selection of International Classification of Diseases (ICD-0) to standardize terminology and prognostic and treatment indicators.
 10. Significance for Cancer Control: To increase the use of standardized criteria and diagnostic terminology and implications for cancer diagnosis, control and treatment.
- National Cancer Program Objectives: C3 Approaches: C3.2
11. Project Officer: Chauncey G. Bly, Ph.D., M.D.
 12. FY 1977 Funds: \$40,000



Treatment, Rehabilitation and Continuing Care Branch

Activities supported by the Treatment, Rehabilitation and Continuing Care Branch will be discussed in two sections -- Treatment Programs, including oncology nurse education, and Rehabilitation Programs.

Treatment Program

The treatment program supports activities in four areas: 1) assessing patterns and standards of cancer treatment; 2) assessing the need for additional treatment interventions; 3) identifying proven treatment modalities suitable for widespread application; and 4) through field test, demonstration and promotion, encouraging the use of these treatment interventions by health professionals and the public.

A primary emphasis has been on the development of programs which foster multi-disciplinary cancer management at the community level and demonstrate that modern, sophisticated cancer treatment can be effectively applied in a community setting.

In DCCR's Network Programs, primary cancer experienced hospitals establish a cooperative alliance with satellite hospitals, clinics and practitioners with an overall goal of improving the quality of cancer care within a geographic area. Twin thrusts have been the implementation of proven treatment protocols and active educational programs. The network approach was initiated in 1973 with the establishment of seven treatment networks for rapidly applying new, proven treatment protocols to childhood acute lymphocytic leukemia (ALL). Some of these networks have been expanded to other pediatric and adult hematologic malignancies. Similar treatment networks for multi-disciplinary patient management were created, including twelve networks for patients with breast cancer and seven networks for patients with cancers of the head and neck. A major new DCCR program area features cancer control treatment networks centered about member institutions of the multidisciplinary Clinical Cooperative Groups. In these efforts, leading authorities in the field of clinical oncology will work closely with local community hospitals and physicians providing consultation, in the development of training programs and in the implementation of the latest proven patient management protocols. This program is seen as a major step in bringing recognized excellence in clinical oncology to the local community hospital.

Seven projects have been developed in a Clinical Oncology Program directed at communities and hospitals which do not have a major cancer center or university affiliation. The objective is to develop mechanisms in these communities to field test new treatment methods and, in addition, to implement cancer control activities in diagnosis, pretreatment evaluation, rehabilitation, and continuing care. These projects have encouraged the development of multidisciplinary teams of clinical oncologists practicing in one to three community hospitals. Emphasis has been on enlisting the cooperation of the practicing community physicians in developing multidisciplinary management guidelines for the major types of cancers seen. This program will provide

inputs for testing the concept of community cancer centers.

Smaller programs, funded by five grants, provide studies on specific aspects of treatment. These include areas such as: 1) pediatric care in a community setting and pediatric oncology studies in treatment of long-term survivors with childhood cancer; 2) regional radiation therapy networks and regional ambulatory chemotherapy networks; and 3) development of computer based decision analysis systems to determine optimum staging and treatment methods.

Recognizing the pressing need for trained nurse oncologists to effectively implement successful cancer treatment programs, DCCR has funded nursing education projects at cancer hospitals, medical centers and community hospitals. Many have been successfully completed and are being evaluated to provide future directions in oncology nurse education.

Efforts addressed at assessing needs for treatment interventions comprise contracts to the Delaware Valley Pediatric Oncology Program and Tumor Registry, the DESAD program of medical surveillance of females exposed in utero to synthetic non-steroidal estrogens and grant funding for the "Patterns of Care Study" of the American College of Radiology.

Clinical Chemotherapy in Cancer Control

In 1973, the most advanced methods of chemotherapy were available in relatively few hospitals in the United States. An important goal of the National Cancer Program is to shorten the time between important advances in treatments and their application to the cancer patient. The objective of seven projects initiated in 1973 was to extend the recent progress in chemotherapy and in combined-modality therapy from existing centers of cancer care and research to community hospitals and physicians. Through the prototype networks created under the Prototype Clinical Chemotherapy Program in Cancer Control, selected centers, or "primary" hospitals, have been able to link satellite or affiliate hospitals and physicians to their chemotherapy activities and thereby assist in providing a major part of the patient's treatment in the satellite setting. This has been accomplished through the provision of educational programs, treatment guidelines and data collection assistance and guidance. Network development, protocol development, and network coordination were funded by DCCR with treatment costs provided through other sources.

Initially, the projects were confined to acute lymphocytic leukemia (ALL) among children, to Hodgkin's disease, and to the other lymphomas in adults. One project was expanded during the third year to include the treatment of the other hematologic malignancies, i.e., chronic lymphocytic leukemia, chronic granulocytic leukemia, and multiple myeloma. Two projects, centered in children's hospitals, expanded to include other pediatric malignancies.

All contractors developed treatment protocols for childhood ALL and six projects developed the necessary protocols for all stages of adult lymphomas. At present, over 2,400 patients have been registered in the program and have

received therapy and follow-up under supervision of physicians participating in the networks. Over 430 pediatric patients with ALL have received treatment, such as: 1) remission induction therapy using vincristine and prednisone; 2) prophylactic CNS therapy combining cranial radiotherapy and methotrexate; and 3) maintenance therapy using 6-mercaptopurine and methotrexate, with "pulse" treatments of vincristine and prednisone. These protocols have shown results in remission induction rates, remission duration, survival rates and in retarding the development of CNS leukemia, which compare favorably with the best results from other national studies.

680 adult patients with Hodgkin's disease and 1,040 patients with non-Hodgkins lymphoma have been treated with radiation therapy, chemotherapy, or combinations of both, following complete staging workup at either the primary institution or network hospitals. Many of those patients requiring resources available only at medical centers were later able to return to their local communities for maintenance chemotherapy and follow-up by their own physicians. These projects have evaluated protocols for treatment and the effectiveness of the network approach. They will provide a comparison of results, in both remission duration and survival, for the group of patients treated in their community with similar patients treated in institutions engaged in primary clinical research.

Some programs have encountered limitations and impracticality in administering treatment in rural, community hospitals. Some of the networks could not be achieved without significant changes in resources and capability at the local level. One proved impractical because of an already existing, effective statewide pattern of patient care referral. Other projects operated well in the rural environment. These contrasting situations are providing information on approaches needed for future programs that will address the particular problems of rural areas on a larger basis.

The projects continue to exhibit the ability to improve treatment over a large geographic area through the use of seed money to establish and manage cooperative networks and develop tools (e.g., protocols, data collection, quality control, tumor boards, registries, etc.) that make use of available resources and the desires of physicians and institutions to provide the best known care. Even in areas where resources were severely limited, a higher level of quality care has been provided within the network than was previously possible, through the development of communications links with the Centers.

The primary problems that have been encountered and, by and large, solved were 1) delays in reaching an operational stage due to the newness of DCCR's network approach and the provider's dependence on previous patterns of referral and consultation; 2) delays required to resolve problems in the development of protocols that had just recently evolved out of the research phase; 3) delays in reaching physicians in outlying areas; and, 4) delays caused by requirements to organize methods to assist busy practitioners in data collection. These problems were overcome with almost all projects showing excellent contributions during later implementation.

Continuous evaluation of outcomes and entry rates has resulted in both improved protocol modification, and, in some projects, the entry into the program of most of the area's cases.

This program is currently undergoing active evaluation. Three have been completed, while four will receive funding for an additional one or two years.

Breast Cancer Management Network

Problems in the area of breast cancer are being approached through multiple DCCR programs. These provide for the education of health professionals and the public in specific techniques for screening, diagnosis, treatment and rehabilitation, and are demonstrating methods for individual interventions. These include the Cancer Information Services, the Breast Cancer Detection Demonstration Programs and research into the Psychological Aspects of Breast Cancer. The Breast Cancer Network program deals specifically with the management of breast cancer and is directed at one of the important goals of the Cancer Control Program: to assure that modern cancer management techniques are field tested, demonstrated and made available for application by the health care provider.

To assist in developing approaches to breast cancer management that could be applied nationwide, twelve projects have been contracted. They are the Prototype Network Demonstration Projects in Breast Cancer. These projects provide for the development, implementation, field testing and evaluation of networks of community hospitals and physicians linked to experienced, primary hospitals within a State or major geographical area.

Within these networks, project staffs, participating hospitals, tumor boards, specialists in treatment and rehabilitation, and medical associations have joined together to develop guidelines for quality controlled, comprehensive multidisciplinary approaches to detection, diagnosis, treatment, rehabilitation, continuing care and follow-up care for breast cancer patients.

These projects were initiated in FY 1974. All completed an initial planning year and after two years of operation, have undergone Merit Peer Review. They have been successful in improving care for patients by applying existing resources in a cooperative manner and managing patients throughout the treatment and continuing care processes. To obtain a cooperative situation and to improve the administration of interventions, all projects have conducted workshops, seminars, lectures, individualized consulting, and other means of continuing education. The American Cancer Society (ACS) and other organizations have been especially helpful in assisting the networks to provide this public education. The outreach and education programs have involved a large percentage of the practitioners in their areas and thousands of nurses have received training in breast self-examination (BSE) teaching and care for breast cancer patients. These programs have been conducted in network hospitals, churches, nursing homes, union meetings, schools and at professional conferences.

The treatment networks have a variety of configurations dictated by the

health care system within the region. Some rural areas have emphasized the person-to-person network, where the project and its primary hospital have worked directly with the physician. However, most comprise a network of hospitals, where the physician's local hospital provides most of the outreach and assistance. These arrangements have worked well in most areas. An early indication of success was noted by the willingness of both physicians and hospitals to join these regional networks. To date, about 145 hospitals are active participants as well as most of the physicians who provide care for breast cancer patients.

The final measure of success will be the improvements achieved in early diagnosis, treatment, and rehabilitation. Feedback from participants in the networks indicates that a more complete range of care has been provided to patients and that greater participation in the quality control mechanisms (pathology review committees, tumor board meetings, greater use of quality controlled case management and treatment guidelines, etc.) has already occurred.

Over 4,000 patients have entered the networks. In most areas, this assures that the latest treatments are being used and that rehabilitation and follow-up is being applied.

The problems in establishing these 12 networks have centered on the complexity of organizing care over large areas and providing acceptable guidelines for the broad range of interventions. In some cases delays were experienced in overcoming a reluctance among practitioners to join networks where boards, committees, and consultants reviewed their practice. In most cases, however, these review mechanisms were considered to be of assistance in improving care procedures.

The contractors are currently more than meeting goals for patient accrual. The merit review committee has recommended extension of these projects for an additional two years to permit continued evaluation.

Head and Neck Cancers

Head and neck cancers represent an important cause of cancer morbidity and mortality in the U.S. The estimated number of new cases per year is 33,000. A systematic approach to field testing and evaluating techniques for the management of head and neck cancers is necessary to ensure that the largest possible population of patients benefits from current knowledge and the combined capabilities of the available health care system.

In 1974, the Cancer Control Program was expanded to include demonstration projects to develop comprehensive approaches for detection, diagnosis, pretreatment evaluation, treatment, continuing care and rehabilitation of patients with head and neck cancers. Excluded as head and neck-related cancers were thyroid cancer, skin cancer and lymphoma. As of the current fiscal year, this expansion has resulted in seven ongoing projects, the Prototype Comprehensive Cancer Control Projects for Head and Neck Cancer. Hospital networks include cooperating physicians, dentists, educators,

health professionals, and medical institutions and associations. Eleven contracts were let and seven networks established. Six networks are now in full implementation. The three older networks have passed merit peer review and have been recommended for continuation.

The projects are primarily concerned with early detection, sound management of precancerous lesions, effective therapeutic measures that are least disabling and disfiguring, early application of measures to achieve maximum feasible rehabilitation, and effective palliation for those who cannot be cured. Educational and network information materials and programs have been formulated and are in use. Early detection programs of dental examination in high risk populations have been initiated. The patient management guidelines for this complex group of cancers have been accepted for use by all seven network centers. Specific protocols have been developed for management of carcinoma of the oral cavity, the oropharynx, the larynx, and the hypopharynx, the cervical esophagus and cervical trachea, the nasopharynx, the major salivary glands and the paranasal sinuses.

These management protocols provide not only guidelines for what should be done, but identify pitfalls to avoid. The management protocols are designed to overcome problems such as: 1) inadequate incisional biopsy of a suspicious oral cavity lesion; 2) failure to review previous histopathology slides; 3) lack of multidisciplinary approach, where it is indicated; 4) permitting a histopathologic benign diagnosis to override a clinical diagnosis of carcinoma; 5) compromise of the ablative phase of surgery in order to accommodate limited reconstructive skills; 6) compromise of surgical margins because radiation therapy or chemotherapy was, or is, to be given, or conversely, giving less than adequate tumor dose of radiation therapy with the intent of resorting to surgical excision of any residual disease; 7) assessing the degree of success or failure of radiation therapy on the basis of the response of the lesion during or immediately on completion of treatment; 8) failure to realize the implication of the "condemned mucosa" or multiple primary syndrome; 9) failure to perform complete physical examination; and, 10) tailoring the surgical resection to the ability of the surgeon, rather than the objective requirements imposed by the lesion.

Clinical Cooperative Groups

The Cancer Control Program in the Clinical Cooperative Groups was established in 1976. During the 1977 fiscal year, expansion of this program has brought a total of five Cooperative Groups under contracts with the DCCR, having the goal of promoting wider use of the most up-to-date patient management techniques by community hospitals and local physicians.

Five groups have been funded thus far. These are: the Children's Cancer Study Group (CCSG); the Eastern Cooperative Oncology Group (ECOG); Southwest Oncology Group (SWOG); Gynecologic Oncology Group (GOG); and the Radiation Therapy Oncology Group (RTOG). Primary member institutions within each cooperative group have established networks of affiliated community hospitals which will facilitate the transfer of new treatment techniques as well as providing educational programs, oncological consul-

tations and data managerial services.

A total of 42 primary institutions within the Groups have developed a network of 207 affiliates providing best available cancer management to patients at community hospitals.

Further expansion of these networks is expected within the Groups under current contracts and additional Groups are expected to seek similar contracts thereby widening the impact of this program.

Clinical Oncology Program

Current resources for the care of cancer patients within geographical health care service areas largely depend on individual physicians, surgeons and radiotherapists in local community hospitals. Care is usually competent and often superb during a particular phase of the patient's illness, but may become fragmented during the patient's overall course from diagnosis through rehabilitation and continuing care. Consultation patterns are not always well established or utilized and the continuing role of the referring physician is often neglected. This makes continuing care especially difficult and makes attempts at rehabilitation and data analysis on care of new cases almost impossible.

Of greatest concern is that the close coordination of skilled oncologic specialists (i.e., surgeons, radiotherapists, chemotherapists) that is required for combined-modality therapy of early cancer in favorable stages of the disease may not be consistently practiced in such a fragmented community. The alternative has been referral to a major center and this has been highly disruptive to the patient's and family's social and economic lives. The perception of this problem has led to a willingness of physicians and their hospital administrators to consider new approaches to coordinated combined-modality cancer management.

The Clinical Oncology Program was directed at consortia of one to three community hospitals that had no major affiliation with either a comprehensive center or a university. It differed conceptually from the network program in that the community hospital itself was to identify resources and plan and develop the organization and implementation plan. This has included modern diagnostic and staging techniques, treatment guidelines, quality data management through the tumor registries, educational programs, and advanced rehabilitation and continuing care services. These schemes will be field tested in a configuration appropriate to the health care community.

Of the seven active projects, six are in full implementation and one in the planning phase. The principal investigators have carefully and diplomatically involved community physicians and other health care providers in their planning. This has been the key to acceptance of these federally funded programs. Problems have centered around community manpower shortages in medical oncology and particularly in oncology nursing, and lack of available guidelines for developing comprehensive cancer rehabilitation and evaluation methodologies for such community projects.

These projects appear to represent a relatively cost-effective, successful approach to organizing community resources for improved cancer care. The contractors are providing matching funds for implementation and show excellent prospects for financial self-sufficiency when DCCR funding is completed.

Oncology Nursing Education Program

The professional nurse along with supportive nursing personnel is one of the essential providers of care to cancer patients in all phases of the "cancer experience." For example, two professional nurses who have expanded their skills in physical assessment, regularly do bimanual pelvic and colposcopic examinations on patients admitted to study in the DES project. Professional nurses are utilized in the two large DCCR breast cancer and female pelvic cancer screening projects, doing breast examinations as well as teaching Self Breast Examination to women, obtaining gynecologic histories and doing Pap smears. The important role of nursing personnel in the treatment aspects of cancer control is well recognized. The role of the professional nurse in the demonstration rehabilitation projects was quickly identified; most use professional nurses to coordinate the program for cancer patients referred for rehabilitation services.

The Oncology Nursing Education Program supports three types of education programs for nursing personnel and one continuing care demonstration project. Educational programs are: 1) short-term continuing education courses, 2) undergraduate and masters level credit courses in six University Schools of Nursing, and 3) Enterostomal Therapy. In the continuing care demonstration oncology nurse coordinators have the key responsibility for directing the program.

Only isolated one or two day seminars, workshops or courses in oncology nursing could be identified in continuing education, general undergraduate or masters level programs prior to the DCCR projects. Five of the eleven projects which were established under the Oncology Nursing Education Programs in Cancer Hospitals, Medical Centers have developed and implemented credit courses for both the undergraduate and masters level nursing student. For the first time oncology nursing is now identified as a specialized entity rather than under the rubric of Medical/Surgical nursing and is established in their curricula. The four projects funded under Oncology Nursing Education Programs in Community Hospitals have developed and implemented credit courses for registered and licensed practical nurses in three communities, where, prior to government funding no such program had existed. One community based project has designed and implemented course work for nurses in hospitals and in the community who interface with cancer patients and their families, the clergy, nursing home administrators, and hospital volunteers.

More than 3,848 nursing personnel have attended these courses coming from over 150 hospitals and representing most states in the United States. They have learned concepts critical to the understanding of cancer as a major health problem. The focus of the various curricula has been on the

identification of factors associated with the etiology of cancer, its epidemiological patterns, public attitudes, case finding and diagnostic techniques, and the various treatment modalities in which nursing personnel participate. The curricula have provided an integral overview of the pathophysiology of cancer and the psychosocial aspects of the cancer problem. A clinical practicum was provided in all of the two to ten week Continuing Education Courses as well as in a number of undergraduate and graduate courses for nursing students. To the extent possible and appropriate for the educational objectives, clinical practice was directed towards improving the nurse's skill in the management of the cancer patient, i.e., understanding the medical-therapeutic regime and its implications for nursing intervention, and performing a nursing assessment to determine patient and family strengths which could be utilized during the rehabilitation process or terminal care. Emphasis was placed on the responsibility of the nurse in assisting persons to cope with the stress of illness and hospitalization. In addition, clinical observational experiences were provided.

Three Enterostomal Therapy Education projects were established to educate registered professional nurses as specialists in the care of persons having enterostomies and to increase the number of enterostomal therapists thus decreasing the training deficit of this category of health professional. The curriculum design consists of six weeks of instruction and clinical experience. Instruction is given in the areas of surgery, medicine, urology, dermatology, psychiatry, nutrition, medical social work and community relationships. In the clinical experience, emphasis is placed on teaching and patient participation in self-care. Each student is required to have a minimum clinical experience with six patients. Two of the projects have implemented a stoma rehabilitation clinic to meet ostomy patient needs with their local United Ostomy Association, the self-help group for the enterostomal patient. Over 240 nurses have completed these courses.

The continuing care project, Development and Implementation of Cancer Care Coordination Team, has developed a plan and system, utilizing oncology nurse coordinators with a public health nursing background, to provide continuing care to cancer patients following discharge from the hospital either directly or by coordinating hospital specialized and/or community resources. On January 3, 1977, the project began accepting patients. During the first month of operation, 29 patients were referred by ten different physicians.

Fourteen of the eighteen Oncology Nursing Education projects will be completing their contracts within the next few months. It is unclear at this point (until after submission of the Final Report by each contractor) as to how many programs will be self-sufficient without government funding. However, considerable outreach activity has been generated as a result of these projects by contract staff who have served as consultants in: 1) planning and/or speaking in community and national oncology nursing symposia; 2) planning oncology nursing care units; 3) serving on Professional Education Committees of the local American Cancer Society units or divisions, and 4) publishing in professional nursing journals.

The primary problems emerging from these projects have been: 1) difficulties in continuing programs at the present level without government funds, and 2) development of an evaluation methodology to assess program impact. All of the contractors have conducted an adequate to an excellent evaluation of the educational process using standard tools for measurement. The problem of impact assessment is primarily the lack of valid measurement tools and limitations on the number of surveys that could be performed during the life of these contracts. The nature of nursing practice precludes absolute measurement. Although the educational evaluation does not necessarily indicate a rigorous scientific project design, the results of all pre- and post-testing show an increase in cognitive learning. Attitudinal change has also been measured in many projects and significant positive change has been found in most instances. There is considerable anecdotal data indicating success of the program, i.e., nurses who, after a course, have elected to practice in an oncology setting, employers who have advertised in a newspaper for nurses who have completed one of the courses, and continual requests from physicians engaged in cancer management for nursing oncology training programs for their staff nurses.

DESAD Project

Synthetic non-steroidal estrogenic substances (herein denoted "DES") were administered to pregnant women over several decades until clinical trials in 1953 failed to show expected benefits in preventing spontaneous abortions. Estimates indicate that from 500,000 to 2,000,000 women may have been treated with DES during this period of its availability. Thus, from 250,000 to 1,000,000 female offspring and an equal number of male offspring have been exposed to DES during gestation. Studies have linked such exposure to specific malignancies and other abnormalities of the lower reproductive tract in a fraction of female offspring.

The aim of DCCR's DESAD project, The Study of the Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed In Utero To Synthetic Estrogens (DESAD Projects), is to assess, comprehensively, the magnitude and severity of the health hazards to such exposed offspring which may have resulted from the administration of exogenous, synthetic estrogens to their mothers.

A detailed protocol was designed during the project's first year of support and presents the background and rationale for the project, together with project aims, program design and procedures for participant recruitment and follow-up.

Two of these aims are to estimate the prevalence and incidence rates of vaginal epithelial changes among the general population of exposed females and to determine the upper bound for risk of adenocarcinoma.

These aims will be accomplished through identification and enrollment of a minimum of 2,000 females, project wide, with documented exposure to DES in utero, 500 of whom are identified from prenatal record review. In addition, a broader segment of the exposed population, as reflected by docu-

mented referrals, documented walk-ins, (DES offspring presenting themselves to examination center) and participants without documentation, but having abnormalities of the DES-type are enrolled. An enrollment of 750 nonexposed subjects who are siblings of or matched to the exposed record review participants serve as controls.

Both control and experimental groups are gynecologically and colposcopically examined at regular intervals -- usually on an anniversary basis, or more frequently if deemed necessary by the examining physician. The examination includes vaginal and cervical cytology, colposcopy, palpation and vaginal staining. Biopsies of suggested abnormal areas are taken.

During 1977, the project will publish its first baseline findings which will include such topics as :

- rates of neoplasia in experimental group compared to the control group, and
- factors related to vaginal and cervical epithelial changes, such as drug dosage and duration of administration.

By June, 1977, it is expected that all participants will be selected and enrolled. The project will be continued for a five-year period to follow this cohort.

Patterns of Care Study

In order to improve the availability and accessibility of quality radiation therapy throughout the country, a grant was awarded to study Clinical and Research Radiation Therapy in Cancer Care, commonly referred to as the Patterns of Care Study. In this effort the American College of Radiology, a nationwide group of radiation therapists, have joined together to analyze the multitude of components involved in the optimal delivery of radiation therapy. Its objectives are to determine the existing patterns and standards of radiation therapy, to determine the influence of educational and geographical factors in the level of care, to relate the outcomes of therapy to variations in the quality of care and to develop programs to increase the quality of radiation therapy throughout the country. During the first two years of this grant, 168 representative radiotherapy services were surveyed and decision trees and a definition of best current management defined for five tumor sites as well as patterns of variations from optimum management. Continued funding will permit an enlargement in scope to include:

- 1) continuation of the study for five additional sites; 2) an analysis of the outcomes of treatment and its relation to variations in care; 3) a study of utilization and referral patterns; 4) development of improved multi-disciplinary referral systems; and 5) developing and implementing education programs with the aim of improving the quality of radiation care nationwide.

Future directions in the treatment program will include:

- continued emphasis on oncology nursing education, particularly at the masters degree level,
- expansion of the Cooperative Group cancer control program,
- initiation of a surgical oncology patterns of care study,
- expanded community clinical oncology programs, and
- creation of planning and implementation guidelines for establishing community cancer care centers for cancer control.

An important task to be accomplished in FY 1978 will be the assimilation and evaluation of information obtained from completed programs. Successful demonstrations will be identified and model programs defined. The completed prototype chemotherapy network demonstrations will be analyzed as to success, lessons learned, and implications for future programming. Eleven Oncology Nursing Education and the three Enterostomal Therapy Education projects will be concluded. These will be analyzed to identify those programs which can be readily disseminated for use in appropriate institutions throughout the country.

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. John Durant
1919 Seventh Avenue, South
Birmingham, Alabama 35233
3. Performing Organization: University of Alabama
4. Contract Number: 35014
5. Starting Date: 6/15/73
6. Expiration Date: 6/4/76
7. Objective: The objective of this procurement is to foster the wide-spread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hemotologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood Acute Lymphocytic Leukemia (ALL) and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: The contractor developed a network of ten cooperating institutions covering this State and a western portion of Georgia. It provided coordination and treatment education in use of protocols for acute lymphatic leukemia, Hodgkin's Disease and non-Hodgkin's Lymphoma. Thirty-four children and one adult were treated in the network. The contractor's primary emphasis was on providing educational materials to physicians and hospitals on use of protocols in the network. Established referral patterns for these diseases were well established in Alabama and not significantly changed. The greatest effect occurred during the early program emphasis on ALL.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care for leukemia and lymphoma.
National Cancer Program Objective: C5 Approaches: C5.1, C5.2
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: No 1977 Funds

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. Blaise Favara
1056 East 19th Avenue
Denver, Colorado 80218
3. Performing Organization: Children's Hospital of Denver
4. Contract Number: 35019
5. Starting Date: 6/14/73 6. Expiration Date: 6/13/76
7. Objective: The objective of this procurement is to foster the widespread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: The Oncology Center of Children's Hospital of Denver developed a network consisting of 8 primary hospitals, affiliated small community hospitals and over 100 physicians. The network developed a childhood cancer registry and reached 80% of children in sparsely populated geographic region extending from Billings, Montana to Los Alamos, New Mexico and including the entire state of Colorado. An intensive education program included in-house workshops and training. Of 27 patients with ALL, 14 were treated in Denver and 13 under the outreach program. There is no significant difference in patient outcome.
10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care for leukemia and lymphoma.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$25,000

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. G. Higgins
4560 Sunset Boulevard
Los Angeles, California 90054
3. Performing Organization: Children's Hospital of Los Angeles
4. Contract Number: 35013
5. Starting Date: 4/20/73
6. Expiration Date: 4/19/78
7. Objective: The objective of this procurement is to foster the widespread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: USC-LA Children's Hospital developed a network of 25 physicians associated with 15 hospitals in five southern California counties. Protocols for treating acute leukemia in children were developed by the Clinical Chemotherapy Program. The Los Angeles Children's Hospital enters acute leukemia patients on Children's Cancer Study Group Protocols, so that comparisons can be made between children treated in network institutions and those treated on a major Clinical Cooperative Group Protocol. To date, 133 ALL patients have been entered on protocol and initial comparisons show that the induction rate, remission duration, and survival are the same for both groups. This indicates that the network operation, with protocols adapted to be operative in the cooperative network configuration, is successful. These hospitals are entering patients at a rate of 60 children per year. The number of children coming under well defined and controlled management can be doubled. For this reason, and for the success of the network, the work scope has been expanded to include all pediatric cancers. An extension in contract duration is being considered to accommodate field testing and evaluation of the expanded program.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care for leukemia and lymphoma.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$126,000

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. B. Lampkin
Elland and Bethesda Avenues
Cincinnati, Ohio 45229
3. Performing Organization: Children's Hospital Research Fund
4. Contract Number: 35015
5. Starting Date: 5/24/73
6. Expiration Date: 11/23/76
7. Objective: The objective of this procurement is to foster the widespread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: The contractor developed a network of over 30 hospitals, most of which are community hospitals within a 75 mile radius of Cincinnati in rural areas. The network's primary hospitals include Children's of Cincinnati, University Hospital in Cincinnati and several hospitals in Dayton, Ohio. The network encompasses an area serving Southwestern Ohio and parts of West Virginia, northern Kentucky and eastern Indiana. A central data center and coordination office was developed and a pathology review panel put into operation for uniform diagnosis and classification. 83 children with ALL have been entered on the CCP protocols in 3 years. The potential of the network and the cancers treated has not been fully tested. It remained largely a pediatric cancer network and was expanded to include all pediatric cancers. An additional 75 patients were seen including 19 children with solid tumors and adults with lymphoma. The Clinical Chemotherapy program has apparently resulted in an increased quality of care for children in the Cincinnati area. Because of an active public awareness and continuing education program, twice as many children have been seen as in the 3 years prior to the program. A major accomplishment has been the reorientation of the care of children with cancer back into the medical community after initial diagnosis and plan of therapy.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care for leukemia and lymphoma.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: no FY 1977 funds

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. Ross McIntyre
Dartmouth College
Hanover, New Hampshire 03775
3. Performing Organization: Dartmouth Medical School
Dartmouth College
4. Contract Number: 35017
5. Starting Date: 6/5/73 6. Expiration Date: 6/4/78
7. Objective: The objective of this procurement is to foster the wide-spread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: Dartmouth Medical School developed a network comprising the University of Vermont's College of Medicine and several community hospitals that included both small, rural hospitals and urban community hospitals. Due to regional characteristics, the network evolved in basically a primary hospital-direct-to-physician type of structure. Protocols were developed for acute lymphocytic leukemia, Hodgkin's Disease, and other malignant lymphomas. A total of 173 patients, including 19 children and 154 adults, have been entered in the treatment program and most received their initial treatment in one of the two medical centers, with some patients receiving maintenance by their community physicians. The rural nature of this State and the inadequate resources of the involved rural, small size hospitals limited the aggressiveness of patient management at the local level and a true network was not possible. Information gained by this project, particularly in relation to the problems encountered in rural, community-level treatment, will be valuable to future programs. This project was extended 2 years to permit evaluation of project results specifically for non-Hodgkin's lymphomas.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care for leukemia and lymphoma.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$11,250

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. Richard Silver
525 East 68th Street
New York, New York 10021
3. Performing Organization: Cornell University Medical College
4. Contract Number: 35025
5. Starting Date: 6/18/73
6. Expiration Date: 6/17/78
7. Objective: The objective of this procurement is to foster the wide-spread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: The contractor has developed a network of 23 institutions in New York City, Westchester County and Northern New Jersey Areas. This network involves much of the same area as the Mt. Sinai Network, but does not compete for institutions, physicians, or patients. The network was developed through the Hematologist and oncologists trained at the New York Hospital who have gone into practice in these areas. Patient accrual has been excellent, with 1199 patients entered to date. This figure includes 89 children with acute lymphocytic leukemia and 303 adults with Hodgkin's lymphoma and 658 with non-Hodgkins lymphoma. This project has demonstrated effectiveness in developing multi-hospital cooperation and physician involvement in high quality protocols in a major city setting. Protocols for CML, CLL and multiple myeloma have been developed in a contract expansion and account for an additional 149 patients.
10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care for leukemia and lymphoma.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$300,000

CONTRACT SUMMARY

1. Title: Prototype Clinical Chemotherapy in Cancer Control
2. Principal Investigator: Dr. Louis Wasserman
Fifth Avenue and 100th Street
New York, New York 10029
3. Performing Organization: Mt. Sinai School of Medicine
4. Contract Number: 65276
5. Starting Date: 6/30/73 6. Expiration Date: 6/29/78
7. Objective: The objective of this procurement is to foster the widespread application of proven advances in chemotherapy and combined modality therapy in a demonstration program directed at susceptible tumors in children and/or adults. Centers with experience in modern combined modality therapy will work in cooperation with community hospitals.
8. Proposed Course: The contractor will develop a prototype clinical chemotherapy network program by recruitment of hematologists and oncologists practicing in community hospitals around the primary institution. Efforts will focus on childhood ALL and adult lymphomas and will make use of a system of treatment protocols with data monitoring and supplemental educational programs.
9. Progress: The contractor has developed 6 networks with subnetworks of 30 institutions that surround primary hospitals. The network covers New York City, Westchester County, Long Island and New Jersey, but does not compete with the New York Hospital/Cornell University Medical School's participating institutions and physicians. They have developed an effective pathology review mechanism and a radiation therapy quality control program. Of the 718 patients treated in the network to date, there have been 43 cases of ALL, 281 cases of Hodgkin's Disease stages I, II, IIIA, IIIB, and IV and 394 cases of malignant lymphoma, lymphocytic and histocytic types. The Project has been effective in establishing networks in a major city and suburban areas.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods for leukemia and lymphoma.
National Cancer Program Objectives: C5 Approaches: C5.1, C5.2
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$300,000

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Robert L. Brown, M.D., Director
1645 Tully Circle, N.E., Suite 126
Atlanta, Georgia 30329
3. Performing Organization: Georgia Cancer Management Network
4. Contract Number: 55131
5. Starting Date: 9/15/74 6. Expiration Date: 9/14/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 14 hospitals over the State. The program's outreach has been very effective on a state-wide basis with 669 patients enrolled in the network in year 1. State-wide, 587 breast cancer patients are undergoing primary treatment for disease diagnosed after June 16, 1975. All stages of the cancer are represented. The program has entered over 65% of the 352 malignant breast biopsies that resulted from the 1800 biopsies performed.

Public education has been well established, with 38 education programs on BSE being conducted in cooperation with the ACS. Some 1,398 women have been taught BSE in the hospital programs. In year 2 Georgia hosted a seminar in patient rehabilitation for all Breast Cancer Network Demonstration Program (BCNDP) contractors. Eighteen training programs for BSE trainers have been conducted in various regions of the State. Of the 143 physicians in the State who had primary responsibility for one or more breast cancer patients since June 16, 1975, 115 are participating in the network project. A scientific publication on BSE has been written by Dr. Brown and approved by NCI.

A merit review for all 12 (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Anne C. Carter, M.D.
Box 1214, Downstate Medical Center
450 Clarkson Avenue
Brooklyn, New York 11203
3. Performing Organization: Research Foundation of State University
of New York
4. Contract Number: 45139
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/79
7. Objective: Establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has developed a network involving 16 hospitals. A multidisciplinary team approach was planned in the first year, FY 1975, and has been in operation throughout the two years of implementation.

625 women from the Brooklyn, New York area were entered in the network program in implementation year 1. In the second year of implementation 350 women were entered by March 3, 1977. For a data base, over 10,000 past breast cancer patients will be followed along with new network cases to aid in an evaluation comparison.

Outreach by daily training sessions for inter-city women in breast self-examination has been initiated. Most of the professional education programs have involved house staff in participating hospitals. Training for nurses in breast cancer care has been initiated with 100 nurses involved. Education has encompassed multidisciplinary seminars and workshops, training nurses in BSE, and in-service training programs for social workers.

Evaluation plans have been completed in all areas and patient follow up is being accomplished on a frequent (every three month) basis by participating hospitals.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objectives: C3, C5 Approaches: C3.3, 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.
12. FY 1977 Funds: \$385,016

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Paul F. Engstrom, M.D.
Central and Shelmire Avenues, Fox Chase
Philadelphia, Pennsylvania 19111
3. Performing Organization: The Institute for Cancer Research
Fox Chase Cancer Center
4. Contract Number: 45055
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 9 hospitals in Pennsylvania and New Jersey. Community health programs for breast cancer have been implemented in the communities represented by these hospitals. During the first implementation year, 258 newly diagnosed and 273 recurrent cases of breast cancer were entered by the network. Guidelines have been developed for breast cancer management. An estimated 2,000 women have participated in screening programs. Health educators in each network hospital have initiated training programs with the cooperation of ACS and local organizations. A multidisciplinary approach to care is being emphasized. Tumor Board meetings, Treatment Review Committees, and rehabilitation professionals have met regularly for improving treatment through consultation and professional education.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Roger S. Foster, Jr., M.D.
Associate Professor of Surgery
Burlington, Vermont 05401
3. Performing Organization: University of Vermont
College of Medicine
4. Contract Number: 65322
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 16 hospitals in Vermont. Implementation has been multidisciplinary in approach, with 175 patients entered into the network Tumor Registry during the first year of implementation. A retrospective review, covering all hospitals in the State, showed approximately 300 patients treated in 1973 and 1974, as an appraisal of past community practices. All network hospitals have elected Cancer Coordinators, who are coordinating network activities covering the entire State. The network collaborated with Dartmouth's Breast Cancer Network Demonstration Project to formulate patient management guidelines. Both public and professional education programs have been implemented using hospitals, ACS, Heart Associations, and the Visiting Nurses Associations. Approximately 1,000 women (including hospital staff that will teach others) have received a one-on-one training in BSE. Three statewide workshops have been held for nurses on various aspects of cancer. Two public education programs have been televised. Clinical and other treatment programs have been provided to physicians.

The Vermont network has developed several excellent teaching films relating to breast cancer and are in the process of filming additional ones.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; two of them required further review which will be finalized in May 1977. It was recommended that the two projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test and evaluate: diagnosis and pretreatment evaluation, treatment and followup care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objective: C3, C5, Approaches: C3.3., 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.
12. FY 1977 Funds: \$297,858

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Arthur F. Hoge, M.D.
825 N.E. 13th Street
Oklahoma City, Oklahoma 73104
3. Performing Organization: Oklahoma Hospital's Breast Cancer
Control Network
Oklahoma Medical Research Foundation
4. Contract Number: 45137
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of cancer patients. Work to be performed in conjunction with the University of Oklahoma Health Sciences Center.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has developed a network involving 23 hospitals throughout Oklahoma. A multidisciplinary approach to breast cancer management has been developed and implemented for two years. This Network entered 709 patients in year 2 and 800 in year 3. For baseline data and evaluation of new network cases, 2,459 previous breast cases have been entered into the registry.

Involved disciplines encompass diagnosis through rehabilitation. A centralized registry, a Developmental Therapy Committee, a network of over 60 consultants, outreach for attendance or consultant-involvement in a weekly Tumor Board meeting in most of the participating hospitals, monthly newsletters on treatments and Tumor Board meetings to network physicians and nurses, a statewide education program for physicians and nurses, and a public education program have all been developed and are operational within the Network.

The outreach program to medical professionals has involved most practitioners in the state and 758 nurses.

The public education component has reached an estimated 19,000 women with individualized instruction on self-examination. T.V. programs (using network nurses and project personnel, plus two showings of "Why Me?" followed by questions and answers) have been aired to an estimated audience of 50,000 women for each program.

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: John Horton, M.B.
47 New Scotland Avenue
Albany, New York 12208
3. Performing Organization: Albany Medical College
4. Contract Number: 45140
5. Starting Date: 6/26/74 6. Expiration Date: 6/25/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has planned a network involving 7 hospitals in the upper New York State and Western Massachusetts regions. Implementation emphasizes the multidisciplinary team approach to care. 254 patients were entered into the network in year 2 and 177 were entered by March 3, 1977 for year 3. Program components implemented are: (1) project directors' program for network coordination; (2) nursing care program; (3) social work program; (4) statistical-computer support; (5) epidemiology program; (6) attitudinal program; (7) counseling program; (8) model reporting program; (9) long-term financial planning program; (10) estrogen receptor assay program; and, (11) immunologic monitoring program.

As of mid-year, 106 new patients at network hospitals have been entered into the nursing care program. At the same date 173 cases have been received and entered into the social services program, which involves program components such as counseling, post-mastectomy group, family group, family counseling, discharge planning, and referrals. 21 post-mastectomy classes have been conducted.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objectives: C3, C5, Approaches: C3.3, 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hammer III, D.D.S., Ph.D.

12. FY 1977 Funds: \$346,806

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.

12. FY 1977 Funds: \$51,000

TQ Funds: \$267,005

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: William A. Maddox, M.D.
UAB P.O. Box 193, University Station
Birmingham, Alabama 35294
3. Performing Organization: Alabama Breast Cancer Project
4. Contract Number: 45129 ✓
5. Starting Date: 6/1/74
6. Expiration Date: 5/31/79
7. Objective: Establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a unique individual statewide network involving 186 participating surgeons, radiologists, and inter-nists. 198 patients were entered during the first year of implementation.

The program staff, a network of consultants in 9 Alabama cities, participating professional associations, a mail-out program of guidelines to 300 physicians, and the MIST Line for physicians have provided substantial breast cancer control outreach to Alabama's practitioners. Public educational programs for BSE education have been initiated in one major city.

Alabama's program has been well organized using a person-to-person approach.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objective: C3, C5, Approaches: C3.3, 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.

12. FY 1977 Funds: \$139,000

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Douglas J. Marchant, M.D.
Box 319, 171 Harrison Avenue
Boston, Massachusetts 02111
3. Performing Organization: New England Medical Center Hospital
4. Contract Number: 45054
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/79
7. Objective: Establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 12 hospitals in Massachusetts and Maine (1 hospital). The network in its present configuration has entered 661 breast cancer patients in year 2. As of March 3, 1977, 198 patients have been entered into the network and Tumor Registry for year 3. Agreements on network operation, data collection formats, evaluation and quality control procedures, and treatment guidelines and protocols have been reached among organizational participants. A monthly newsletter program is in the planning stage. Participation by ACS, Rehabilitation Institute of the New England Hospital, Physiotherapy Department, psychiatrists, and nurse practitioners in the education and rehabilitation programs is being obtained to provide a multidisciplinary approach to care. Public and professional education programs have been implemented in early 1975, and the first patients were entered at the beginning of FY76.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 Breast Cancer Network Demonstration Projects (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: L. Herbert Maurer, M.D.
Hitchcock Clinic
Hanover, New Hampshire 03755
3. Performing Organization: Dartmouth College
4. Contract Number: 45146
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has established and coordinated a network of 17 hospitals in New Hampshire. All 30 hospitals in this State have been informed of the project and have expressed their desire to participate in conferences and educational programs. This project has completed one year of planning and two years of implementation. A multidisciplinary team approach to breast cancer care has been effected. 920 physicians have received guidelines for early diagnosis and treatment. This network had an entry level of 193 new cases for implementation. In year 2 of implementation this level was increased to 317. Four surveys have been conducted to focus on professional training. Training of both physicians and nurses through videotape and lectures has been initiated. Nine hospitals have participated in the educational activities for social workers. Tumor clinics or conferences are being held at most network hospitals as part of their multidisciplinary effort. The rehabilitation and continuing care program has commenced and is operational.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 Breast Cancer Network Demonstration Projects (BCNDP) designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review of all 12 (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objective: C3, C5, Approaches: C3.3, 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.

- 12: FY 1977 Funds: \$345,877

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Condict Moore, M.D., Director
Walnut and Preston Streets
Louisville, Kentucky 40202
3. Performing Organization: Univ. of Louisville Foundation, Inc.
4. Contract Number: 45149
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/77
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients. Subcontractors include Trover Clinic, Jewish Hospital and Norton Children's Hospital.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 5 hospitals in Kentucky. 183 breast cancer patients have been entered into the Network in year 2, covering all stages of the disease. The basic approach to network coordination utilized five institutional coordinators plus project administration staff and speciality consultants.

BSE instruction has been conducted at each hospital for the public and instructor trainers. In addition, pamphlets and videotapes have been prepared for a wider campaign. Over 150 physicians have received lectures through an annual symposium on breast cancer management and network presentations, lectures to county medical societies, and symposia on breast cancer pathology. A network newsletter has been distributed to community physicians. Guidelines for detection, diagnosis, and treatment have been developed and are being reviewed for use in the Network. A multidisciplinary approach, including psychosocial rehabilitation unit services, has been made available to breast cancer patients in the University of Louisville Hospital.

In contrast to the Head and Neck Cancer Network Demonstration Project, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

A merit review for all 12 BCNDP's was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation. In the final merit review of this project, the Intervention Programs Review Committee recommended that this project not be extended for 2 years.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objective: C3, C5, Approaches: C3.3, c.6, 5.3, C6, 5.6, 6.3, 6.6
11. Project Officer: James E. Hamner III, D.D.S., Ph.D.
12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Prototype Network Demonstration Project in Breast Cancer
2. Principal Investigator: Leslie W. Whitney, M.D.
P.O. Box 1668
Wilmington, Delaware 19899
3. Performing Organization: Delaware Breast Cancer Management Program
Wilmington Medical Center
4. Contract Number: 45151
5. Starting Date: 6/28/74 6. Expiration Date: 6/21/79
7. Objective: To establish networks of community hospitals as demonstration programs to the medical community for the utility and need of an organized and multidisciplinary approach to the total care of breast cancer patients.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total breast cancer patient care.
9. Progress: The contractor has implemented a network involving 7 hospitals in Delaware and parts of the adjacent states of Pennsylvania, New Jersey, and Maryland. Most of the remaining hospitals in this area expressed willingness to participate and have done so to a level commensurate with their involvement with breast cancer patients. Seminars for familiarizing local physicians with network patient management procedures have been held both in the primary hospitals and on a statewide basis. Education programs for nurses are well underway. The professional education program involves specialists provided by 21 professional organizations, and other participants such as hospital staffs, ACS, Tumor Control Centers Conference, Association of Delaware Hospitals, etc. Baseline data entry for the registry and subsequent evaluation tasks were completed for 89% of past cases. 227 patients under treatment were entered into the network in year 2; 210 for year 3. A bi-monthly newsletter is being circulated to 300 professionals. Public education on BSE has included presentations to various women's clubs and to over 5,000 high school students.

A merit review for all 12 Breast Cancer Network Demonstration Projects (BCNDP) was held on May 20-21, 1976. Ten of the 12 projects were progressing well; 2 of them required further review, which will be finalized in May, 1977. It was recommended that the 10 projects be extended for an additional two years of implementation in order to provide adequate data for proper evaluation.

In contrast to the Head and Neck Cancer Network Demonstration Projects, which designed mutually agreeable patient management guidelines and forms, each of the 12 BCNDP's designed its own packet of forms and patient management guidelines. Diagnostic, treatment, and evaluation subcommittees were

originally formed and aided in general recommendations for the entire 12 contractors, early in the program's existence.

10. Significance for Cancer Control Program: To identify, field test, and evaluate: diagnosis and pretreatment evaluation, treatment and follow-up care methods, and rehabilitative methods for the female breast cancer patient.

National Cancer Program Objective: C3, C5, Approaches: C3.3, 3.6, 5.3, C6 5.6, 6.3, 6.6

11. Project Officer: James E. Hamner III, D.D.S., Ph.D.
12. FY 1977 Funds: \$276,072

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigator: James H. Brandenburg, M.D.
1300 University Avenue
Madison, Wisconsin 53706
3. Performing Organization: Wisconsin Comprehensive Cancer Center
Board of Regents of the University of Wisconsin
4. Contract Number: 45130
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/79
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves as a qualified cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total head and neck cancer patient care.
9. Progress: A network comprised of nine hospitals has been implemented to cover most areas of Wisconsin. An estimated 220 new cases will have been entered by the end of the fiscal year. Community hospitals in areas throughout the State have expressed interest in participating. These hospitals are serving in the professional education program with 38 using telephone/radio conferences, participating in regional workshops, and receiving network and treatment information in news briefs, guidelines, and audio-visuals. Public education programs are being conducted in cooperation with ACS and using local organizations, as appropriate. Mobile exhibits, posters, announcements aimed at promoting oral self-examinations, and commitment-motivational materials for both rural and urban populations have been used. Professional training programs have been developed and implemented for postoperative care and continuing care, using materials for care personnel and families.

A set of head and neck cancer patient management guidelines has been developed by the ten contractors. These guidelines serve as a teaching structure to advise physicians and all other involved professional personnel on patient management, including detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care.

Earlier a packet of patient forms was designed, reviewed, and approved by all of the contractors. They have also agreed to field test the revised TNM and staging systems proposed by the American Joint Committee for

Cancer Staging and End Results Reporting. The anatomical forms designed by these DCCR networks in head and neck cancer are the ones selected by the AJC for their forms, also.

Each project is responsible for evaluation of its network. DCCR will evaluate the group as a whole, also. This project will be extended for two additional years of implementation in order to assure adequate data collection for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test and evaluate: diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care for head and neck cancer patients.

National Cancer Program Objectives: C3, C5 Approaches: C3.3, 3.6, 5.3, C6 5.6, 6.3, 6.6

11. Project Officers: James E. Hammer III, D.D.S., Ph.D.
Soli K. Choksi, B.D.S.

12. FY 1977 Funds: \$184,000

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigator: Luther W. Brady, M.D.
230 North Broad Street
Philadelphia, Pennsylvania 19102
3. Performing Organization: Hahnemann Medical College and Hospital
4. Contract Number: 55255
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves as a qualified major cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total head and neck cancer patient care.
9. Progress: The network comprised of 8 hospitals had entered 148 cases by April 1977 and anticipates meeting the 200 patient requirement by the end of June.

In cooperation with the ACS, the network uses a mass media program to alert and educate the general population about head and neck cancer. Through December 1976, approximately 3,500 individuals had been screened by means of programs conducted at fixed facilities at hospitals and industrial sites, and numerous scheduled programs at hospitals, industrial sites, and public facilities. The fixed screening facilities in hospitals also serve as training centers for dental hygienists.

Professional education is provided through a network newsletter, which is also distributed to hospitals outside the network and formalized weekly teaching conferences. Monthly conferences are held for psychological support personnel, and monthly network-wide conferences are planned for all professional staff.

Fellowship programs in head and neck cancer and a maxillofacial prosthetics training program are in the developmental stage. A strong radiation physics and dosimetry support element exists at Hahnemann Medical College per se.

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigators:
Frank R. Hendrickson, M.D.
Rush-Presbyterian-St. Lukes Medical Center
1753 West Congress Parkway
Chicago, Illinois 60612

George A. Sisson, M.D.
Northwestern Univ. School of Medicine
303 East Chicago Avenue
Chicago, Illinois

Emanuel Skolnik, M.D.
Univ. of Ill. Medical Center
840 South Wood Street
Chicago, Illinois 60612
3. Performing Organization: Illinois Cancer Council
4. Contract Number: 65256
5. Starting Date: 9/1/75
6. Expiration Date: 8/31/78
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves as a qualified major cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total head and neck cancer patient care.
9. Progress: This network is coordinated by the Illinois Cancer Council and is a network made up of networks developed under previous contracts, CN-45159 to Rush-Presbyterian-St. Lukes Medical Center, CN-45132 to Northwestern University, and CN-65256 to the University of Illinois Medical Center. Membership in the network has been extended to a total of 16 hospitals. Also, some individual physicians and dentists make direct referrals. During the 1st and 2nd years of implementation, a total of 504 and 421 cases respectfully have been entered into the network. These figures represent 75% of all predicted head and neck cancers in the Greater Chicago region.

Various methods for dissemination of professional and public information have been implemented, including telephone consultations, workshops, tumor conferences, small meetings, and symposia sessions. In addition to the network newsletter which is distributed to 900 readers every 2 months, a rehabilitation newsletter is distributed 4 times a year to over 2400 professionals. The network has developed a slide presentation on the multidisciplinary approach to cancer patient management. The detection and management education program conducted for one of the hospital

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigator: Michael E. Jabaley, M.D.
2500 North State Street
Jackson, Mississippi 39216
3. Performing Organization: University of Mississippi Medical Center
4. Contract Number: 55254
5. Starting Date: 6/25/75 6. Expiration Date: 6/24/77
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves as a qualified major cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total patient care.
9. Progress: This project is composed of a base institution at the State University Medical Center and 7 other institutions throughout the state. The entry of the required 200 cases of head and neck cancer into the network should easily be reached by end of current operating year. The various screening programs have been well received and as of January 1977, 3,163 screenings had been conducted. Of these, 37 were referred for further treatment.

A system for data collection and analysis has been implemented.

The project established a pilot telephone lecture network and is planning educational programs on advances in head and neck cancer management for community practitioners. With the University of Mississippi Center Chaplain, the network is organizing a statewide workshop for clergy on counseling of head and neck cancer patients.

A set of head and neck cancer patient management guidelines have been developed by the ten contractors. These guidelines serve as a teaching structure to advise physicians and all other involved professional personnel on patient management, including detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care.

Earlier, a packet of patient forms was designed, reviewed, and approved by all of the contractors. They have also agreed to field test the revised TNM and staging systems proposed by the American Joint Committee for Cancer Staging and End Results Reporting. The anatomical forms designed by these DCCR networks in head and neck cancer are the ones selected by the AJC for their forms, also.

Education Week on Smoking, presentations to parent-teacher associations, local industries and school children. The "Meet Your Mouth" public education program, providing individualized instruction on orofacial self-examination has continued to be presented with successful results. Over 60,000 copies of the pamphlet, "Early Detection of Oral Cancer May Save Your Life" have been distributed to date. Screening programs have been conducted at alcoholism wards of hospitals, industrial sites and domiciliary care facilities.

This project coordinated the development of the head and neck cancer patient management guidelines by the 10 contractors. These guidelines serve as a teaching structure to advise physicians and all other involved professional personnel on patient management, including detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care.

This network has submitted the following articles for publication:

1. Grabau, J.C., Kaufman, S., Uthman, A.A., Scott, S.J.
"Oral/Facial Self-Examination for Early Detection of Cancer."
Presented at the Third International Symposium on Detection and Prevention of Cancer and will appear in the Proceedings of that conference.
2. Grabau, J.C., Scott, S.J., "Early Detection of Head and Neck Cancer Using Oral/Facial Self-Examination." Submitted to the Journal of Preventive Dentistry.
3. Grabau, J.C., Kaufman, S., Uthman, A.A., Scott, S.J., "A Public Education Program in Self-Examination for Orofacial Cancer." Submitted to the Journal of the American Dental Association.

Earlier, a packet of patient forms was designed, reviewed, and approved by all of the contractors. They have also agreed to field test the revised TNM and staging systems proposed by the American Joint Committee for Cancer Staging and End Results Reporting. The anatomical forms designed by these DCCR networks in head and neck cancer are the ones selected by the AJC for their forms, also.

Each project is responsible for evaluation of its network. DCCR will evaluate the group as a whole, also. This project will be extended for two additional years of implementation in order to assure adequate data collection for proper evaluation.

10. Significance for Cancer Control Program: To identify, field test and evaluate: detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care for head and neck cancer patients.

National Cancer Program Objective: C3, C5, Approaches: C3.3, 3.6, 5.3,
C6 5.6, 6.3, 6.6

11. Project Officers: James E. Hamner III, D.D.S., Ph.D.
Soli K. Choksi, B.D.S.

12. FY 1977 Funds: \$339,000

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigator: Sol Silverman, D.D.S.
14th Avenue and Lake Street
San Francisco, California 94118
3. Performing Organization: Northern California Cancer Program
San Francisco Regional Tumor
Foundation
4. Contract Number: 55180
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/78
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves through the San Francisco Regional Tumor Foundation as the administrative body for a network of participating hospitals which function to demonstrate multidisciplinary approach to total patient care.
9. Progress: The contractor has developed a network of 79 community hospitals in five urban areas in Northern California. Through the end of the third quarter FY77, 1,156 cases had been accrued. The governing body for this project, the Head and Neck Cancer Network Steering Committee, is composed of individuals representing community health professionals, hospitals, community cancer organizations, three medical schools, and two dental schools.

This project is unique in its approach as the patients are gleaned from the California Tumor Registry if they are accordingly entered by one of the participating hospitals.

During the planning year, this network developed its own Patient Management Guidelines and data system which is based on the California Tumor Registry (part of the SEER Program).

Extensive communication and education activities have been implemented and include pre-treatment planning conferences, special courses for specific health personnel, physicians, TV lectures for the general public, a maxillofacial consultative education program, and a program to train, evaluate and field test efficacy of dental hygienists in head and neck cancer screening. Further, the University of California is participating in the development of preceptorships for radiation therapists, ENT surgeons, and plastic surgeons.

Each project is responsible for evaluation of its network. DCCR will evaluate the group as a whole, also.

10. Significance for Cancer Control Program: To identify, field test and evaluate: diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care for head and neck cancer patients.

National Cancer Program Objective: C3, C5, C6 Approaches: C3.3, 3.6,
5.3, 5.6,
6.3, 6.6

11. Project Officers: James E. Hamner III, D.D.S., Ph.D.
Soli K. Choksi, B.D.S.

12. FY 1977 Funds: \$350,000

CONTRACT SUMMARY

1. Title: Prototype Comprehensive Network Demonstration Project for Head and Neck Cancer
2. Principal Investigator: James Y. Suen, M.D.
4301 West Markham Street
Little Rock, Arkansas 72201
3. Performing Organization: University of Arkansas Medical Center
4. Contract Number: 55253
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To establish a network of cooperating hospitals and physicians to develop and implement cancer control activities relating to detection, diagnosis, pretreatment evaluation, treatment, rehabilitation, and continuing care of all stages of head and neck cancer.
8. Proposed Course: The contractor serves as a qualified major cancer center and functions to demonstrate this project to a network of community hospitals for a multidisciplinary approach to total patient care.
9. Progress: During the first year of implementation, 292 patients were entered into the network. By the end of the first quarter of the second year, 44 patients were entered. Ninety percent of the head and neck cancer seen in Arkansas is treated by network members. In addition to the 8 network hospitals, 36 individual physicians and dentists were participating as of November, 1976. Memberships for other health professionals were to be offered by January, 1977. Patients with cancer of the thyroid and significant skin cancers requiring major therapy will be included in the network but not in required case load. A maxillofacial prosthetics laboratory with a fully trained maxillofacial prosthodontist, a facial prosthetist, and a maxillofacial prosthetics technician was established by the network. This type laboratory had not previously been available in the state. Other professional educational activities include weekly tumor boards, distribution of a network newsletter, presentations to state and county medical societies, state and local meetings for nurses and hygienists, and yearly head and neck cancer courses for physicians and other health professionals. The network has received an ACS grant for a cancer detection teaching laboratory.

Lay educational efforts include presentations to local civic groups and ACS, educational TV programs and planned exhibits. The network dental hygienist developed a manual entitled, "Dental Hygiene Care of the Hospital Patient", and in conjunction with the University of Arkansas, coordinated a screening program in high risk areas. With the assistance of ACS, the network is organizing a Laryngectomy Visitation Program.

CONTRACT SUMMARY

1. Title: Cancer Control Programs for Clinical Cooperative Groups
2. Principal Investigator: Denman Hammond, M.D.
Los Angeles County - USC Cancer Center
1721 Griffin Avenue
Los Angeles, California 90031
3. Performing Organization: Children's Cancer Study Group
4. Contract Number: 65374
5. Starting Date: 9/28/76
6. Expiration Date: 9/29/78
7. Objective: Strengthen and enlarge the affiliated hospital programs of the Clinical Cooperative Groups to increase the number of community physicians and other health professionals participating in well-defined and monitored protocols for cancer management.
8. Proposed Course: To plan, implement and evaluate a cancer control program; to provide affiliates with well-defined treatment protocols stressing best available non-research treatment; to field test, evaluate and promote effective multidisciplinary treatment in the community; to provide the support services necessary to insure high quality care and data collection; and to institute an education program for all levels of health professionals associated with the program.
9. Progress: Ten CCSC member institutions were selected to serve as sponsor institutions in establishing referral networks and educational programs. The Cancer Control Committee established policy, set goals and developed data processing and quality control procedures. Affiliated institutions were assigned a level of participation ranging from referral to active protocol administration based on initial level of expertise with a view toward upgrading through participation and educational programs. Phase IV protocols for leukemia and one solid tumor have been chosen for cancer control implementation.
10. Significance for Cancer Control Program: To increase the availability of effective cancer treatments to patients in community settings and to field test and demonstrate their effectiveness.

National Cancer Program Objective: C5 Approach: C5.2, C5.3
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$1,297,000

CONTRACT SUMMARY

1. Title: Cancer Control Program for Clinical Cooperative Groups - Southwest Oncology Group.
2. Principal Investigator: Dr. Barth Hoogstraten
3500 Rainbow Blvd.
Kansas City, Kansas 66103
3. Performing Organization: Southwest Oncology Group
4. Contract Number: N01-CN-65285
5. Starting Date: 9/30/76
6. Expiration Date: 9/29/79
7. Objective: Strengthening and enlarging the affiliated hospital programs of the Southwest Oncology Group to increase the number of community physicians and other health professionals providing optimal cancer management.
8. Proposed Course: Provide community physicians and other health professionals with well-defined treatment protocols, support services and continuing education activities in order to field test and evaluate effective treatments in the community setting.
9. Progress: Twenty-six of the 37 member institutions of the Southwest Oncology Group have designated a total of 57 satellites to participate in 9 current group protocols. Primarily due to delays in computer programming and the hiring of data managers, only 36 patients have been entered on studies, however, the basic network appears to be operating satisfactorily and is expected to greatly expand in the coming year.
10. Significance for the Cancer Control Program: Increase the number of patients receiving the most up-to-date cancer management.
National Cancer Control Program Objective: C5
Approaches: C5.1, C5.2, C5.3, C5.5
11. Project Officer: Harry Handelsman, D. O.
12. FY 1977 Funds: \$785,739

CONTRACT SUMMARY

1. Title: Cancer Control Program for Clinical Cooperative Groups -
Radiation Therapy Oncology Group
2. Principal Investigator: Dr. Simon Kramer
1025 Walnut Street
Philadelphia, Pa. 19107
3. Performing Organization: Radiation Therapy Oncology Group
4. Contract Number: N01-CN-75355
5. Starting Date: 5/2/77
6. Expiration Date: 5/1/79
7. Objective: Strengthening and enlarging the affiliated hospital programs of the Radiation Therapy Oncology Group to increase the number of community physicians and other health professionals providing optimal cancer management.
8. Proposed Course: Provide community physicians and other health professionals with well-defined treatment protocols, support services, and continuing education activities in order to field test and evaluate effective treatments in the community setting.
9. Progress: This contract has been funded too recently to exhibit any progress.
10. Significance for the Cancer Control Program: Increase the number of patients receiving the most up-to-date cancer management.
National Cancer Control Program Objective: C.5
Approaches: C5.1, C5.2, C5.3, C5.5
11. Project Officer: Harry Handelsman, D. O.
12. FY 1977 Funds: \$491,040

CONTRACT SUMMARY

1. Title: Cancer Control Program for Clinical Cooperative Groups - Gynecologic Oncology Group
2. Principal Investigator: Dr. George C. Lewis, Jr.
125 Walnut Street
Philadelphia, Pa. 19107
3. Performing Organization: Gynecologic Oncology Group
4. Contract Number: N01-CN-75338
5. Starting Date: 4/21/77
6. Expiration Date: 4/20/80
7. Objective: Strengthening and enlarging the affiliated hospital programs of the Gynecologic Oncology Group, to increase the number of community physicians and other health professionals providing optimal cancer management.
8. Proposed Course: Provide community physicians and other health professionals with well-defined treatment protocols, support services and continuing educational activities in order to field test and evaluate effective treatment in the community setting.
9. Progress: This contract has been funded too recently to exhibit any progress.
10. Significance for the Cancer Control Program: Increase the number of patients receiving the most up-to-date cancer management.

National Cancer Control Program Objective: C5
Approaches: C5.1, C5.2, C5.3, C5.5
11. Project Officer: Harry Handelsman, D. O.
12. FY 1977 Funding: \$297,078

CONTRACT SUMMARY

1. Title: Cancer Control Program for Clinical Cooperative Groups - Eastern Cooperative Oncology Group
2. Principal Investigator: Dr. Marvin Zelen
315 Alberta Drive
Amherst, N. Y. 14226
3. Performing Organization: Eastern Cooperative Oncology Group
4. Contract Number: N01-CN-5348
5. Starting Date: 10/26/76
6. Expiration Date: 10/25/77
7. Objective: Strengthening and enlarging the affiliated hospital programs of the Eastern Cooperative Oncology Group, to increase the number of community physicians and other health professionals providing optimal cancer management.
8. Proposed Course: Provide community physicians and other health professionals with well-defined treatment protocols, support services and continuing education activities in order to field test and evaluate effective treatments in the community setting.
9. Progress: Allocation of contract funds have been made to 26 of the 37 member institutions and to date, 19 subcontracts have been executed.

Institutional Review Boards were organized in those institutions which did not have such boards prior to awarding the contract.

Presently, there are 49 community hospitals involved in this project, and a workshop to train data managers from these hospitals was held in Amherst, New York on March 25, 1977.

10. Significance for the Cancer Control Program: Increase the number of patients receiving the most up-to-date cancer management.

National Cancer Control Program Objective: C5
Approaches: C5.1, C5.2, C5.3, C5.5

11. Project Officer: Harry Handelsman, D. O.
12. FY 1977 Funds: \$499,200

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. Robert Connell
Fifth and Poplar Streets
Walla Walla, Washington 99363
3. Performing Organization: St. Mary Community Hospital
4. Contract Number: 65292
5. Starting Date: 2/16/76
6. Expiration Date: 6/30/79
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: The Blue Mountain Clinical Oncology Program has been approved for implementation following a one year planning phase. These activities involving 3 hospitals (St. Mary's, St. Anthony and Grand Ronde) have created a new level of awareness of clinical advances in oncology, adjunct services, and greatly strengthened interregional ties. There has been a resultant upgrading in physician and nurse education, uniformity of diagnosis and psycho-social service referral routes. In the absence of a full time medical oncologist the program has developed informational contacts with major cancer centers in the Pacific Northwest. The educational program in cooperation with the Oregon Division of the American Cancer Society has been particularly active, presenting at 34 locations to an audience of 749 health professionals, 40% of whom were primary care physicians.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5

Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$69,531

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. William Dugan
1604 North Capitol Avenue
Indianapolis, Indiana 46202
3. Performing Organization: Methodist Hospital of Indiana, Inc.
4. Contract Number: 65336
5. Starting Date: 2/10/76
6. Expiration Date: 2/29/77
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: This project has been approved for implementation after one year of planning. Methodist Hospital is a community hospital and at the same time a referral hospital for cancer patients throughout much of Indiana. The program features three somewhat innovative approaches to comprehensive cancer care. These are (1) check sheet patient management plans (PMPs) developed by multidisciplinary subspecialty teams of 15 members each for each cancer site; (2) patient and paramedical initiated ancillary health referral; and (3) patient responsibility for directing follow-up care. The latter is accomplished through complete patient discharge packet. The concept to be tested is that the cancer patient, vitally concerned about his health condition, will exercise a high degree of compliance when given a definitive follow-through program.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5 Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$71,447

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. J. W. Kraut
751 South Bascom Avenue
San Jose, California 95128
3. Performing Organization: Institute for Medical Research
4. Contract Number: 65293
5. Starting Date: 10/31/75 6. Expiration Date: 10/30/78
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: The operational plan developed during the initial year serves as the workscope for this project. During the first five months of implementation, 515 cancer patients were seen in the three cooperating hospitals (O'Connor, Good Samaritan, Santa Clara Valley) of whom 238 benefited from the multidisciplinary management guidelines. The "on call" representative of the program has emerged as the most frequent source for initiating staging and treatment recommendations. A computerized data system has become operational and a backlog of pre-program patient records is being abstracted and coded. This will permit a comparison of previous patient management practices with current multidisciplinary approaches. Interhospital tumor conferences have been held monthly at each hospital and a computerized interhospital cancer information system is being developed. The Interhospital Nurse Oncology Program is fostering an expanded role for the nurse in the care of the cancer patient, particularly in the development of comprehensive care plans and rehabilitation and psychosocial services.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5

Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: no 1977 funding

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. Edward Moorhead
100 Michigan Avenue
Grand Rapids, Michigan 49583
3. Performing Organization: Butterworth Hospital
4. Contract Number: 65290
5. Starting Date: 11/21/75
6. Expiration Date: 11/20/76
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: After 7 months of planning the Grand Rapids Clinical Oncology Program was implemented. The contractor established project relationships among the tumor registry, participating hospitals (including Blodget Memorial, St. Mary's, Ferguson-Droste-Ferguson, Osteopathic Hospitals and Butterworth), and multi-disciplinary team members in an area where 3600 new cases of cancer occur each year. The Development Task Force, the Area Advisory Committee, 15 site committees and 16 standing committees for specific interventions have developed operational plans for the project and management guidelines for 20 cancer sites. Oncology nurse training programs and nursing guidelines have been utilized. A coordinated rehabilitation and continuing care program and overall project evaluation are actively underway.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5 Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$150,000

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. Jerry Morgan
1300 East Sixth Street
Ada, Oklahoma 74820
3. Performing Organization: Valley View Hospital
4. Contract Number: 65295
5. Starting Date: 2/16/76
6. Expiration Date: 2/15/77
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: This project involving two hospitals (Valley View and Shawnee) in rural Oklahoma is in the planning phase. In the absence of a practicing medical oncologist, a unique plan has evolved whereby each hospital is visited once weekly by an experienced medical oncologist from the Oklahoma University Cancer Center. The university also provides a radiotherapy consultant to augment the staff at Shawnee. There is strong hospital and community support for this program. Management guidelines and rehabilitation plans are being developed. Nursing oncology is being strengthened through active participation in established training programs. Community resources have been identified and included in the program. Tumor board conferences are established and well attended and constitute part of the educational program.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5 Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$50,561

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. David Prager
17th and Chew Streets
Allentown, Pennsylvania 18102
3. Performing Organization: Allentown Hospital Association
4. Contract Number: 65288
5. Starting Date: 3/1/76
6. Expiration Date: 6/30/79
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: This project involves two hospitals (Allentown and Allentown-Sacred Heart) which serve the Lehigh Valley and see approximately 1,000 cancer patients per year. After 1 year of planning the program now moves into implementation. The referring physician automatically becomes part of the multidisciplinary team involved in patient management. Other members are medical, surgical, radiation and nurse oncologists with additional consultants as needed. A multidisciplinary mobile rehabilitation team is available to any patient on recommendation of his physician. In addition to tumor board activities at the two primary hospitals, part of the educational process includes a "circuit riding" tumor board which will make monthly visits to some of the community hospitals in the Lehigh Valley region.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5 Approaches: C5.3, C5.6

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$73,328

CONTRACT SUMMARY

1. Title: Clinical Oncology Program
2. Principal Investigator: Dr. John Whitecar
7700 Floyd Curl Drive
San Antonio, Texas 78229
3. Performing Organization: Southwest Texas Methodist Hospital
4. Contract Number: 65294
5. Starting Date: 2/16/76
6. Expiration Date: 6/30/79
7. Objective: To field test and demonstrate in a community setting newer treatment methods, diagnostic and staging techniques and programs of rehabilitation and continuing care.
8. Proposed Course: A cooperating group of 1 to 3 community hospitals without a major cancer center or university affiliations will organize a clinical oncology program. Responsibilities include: (1) development of management guidelines for the most frequently seen tumors; (2) ensuring a truly multidisciplinary approach to staging and treatment; (3) implementation of advanced rehabilitation and continuing care methods incorporating existing community resources; (4) development of active cancer educational activities; and (5) evaluation of the effectiveness of the overall program.
9. Progress: The Southwest Texas Methodist Hospital Clinical Oncology program has been approved for implementation after 1 year of planning. This program has strong administrative and community physician support. Its excellent facilities will bring a high quality of care to cancer patients in the San Antonio area. Multidisciplinary management guidelines have been developed by the practicing physicians. The integrated rehabilitation plan has identified multiple hospital and community resources. An active educational program for physicians, nurses and other health care providers is currently underway.
10. Significance for Cancer Control Program: Successful demonstrations in a limited community setting of the applicability and benefits of modern multi-modality evaluation, treatment, rehabilitation and continuing care for cancer patients will provide models for use throughout the country.

National Cancer Program Objective: C5 Approaches: C5.3, C5.6
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$50,561

GRANT SUMMARY

1. Title: Community Based Therapy for Children with Cancer
2. Principal Investigator: Dr. C. Thomas Kisker
University of Iowa Hospital
Medical Laboratories Building
Room 24A
Iowa City, Iowa 52240
3. Performing Organization: University of Iowa Hospital
4. Contract Number: 1-R18-CA-18139-01
5. Starting Date: 09/01/75
6. Expiration Date: 08/31/80
7. Objective: The objective of the proposal is to provide optimal care for children with cancer in a rural setting. To this end a group of private practitioners located throughout the state of Iowa and neighboring areas will be organized and participate in an educational program designed to train them in current management of childhood cancers.
8. Proposed Course: Private practitioners will serve as providers of care following diagnosis and assignment to a treatment protocol. Continually available communication between the field practitioners and the hospital based hematologists will be assured through modification of current telephone communications. Evaluation will involve a comparison of care, compliance to protocols, school attendance and morbidity and mortality data collected on Iowa children treated by field practitioners with a control group of children treated concurrently on the same protocols but solely by hospital based oncologists at another center. Psychology and social information will also be collected on the two populations and analyzed for differences in responses between the rural and urban populations.
9. Progress: An effective communication system has been established. As of April 1976, 39 patients had been treated in the Iowa program and 25 in the university control group. Information is being gathered to examine the impact of the project on the medical community and to examine the psychosocial effects of childhood cancer in urban and rural populations.
10. Significance for Cancer Control: Treatment of childhood cancer in a rural setting by cooperation between university and community physicians could greatly ease the burdens faced by patient and family. Successful implementation of treatment protocols and the educational program will result in an increased quality of care for children in the state of Iowa.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$73,594

GRANT SUMMARY

1. Title: Psychosocial Sequelae of Childhood Cancer
2. Principal Investigator: Dr. John E. O'Malley
Sidney Farber Cancer Center
44 Binney Street
Boston, Massachusetts 02115
3. Performing Organization: Sidney Farber Cancer Center
4. Grant Number: 2-R18-CA18429-03
5. Starting Date: 3/1/77 6. Expiration Date: 2/28/80
7. Objective: With the advent of effective surgery, chemotherapy and radiation, increasing numbers of children are surviving 5 years or more. Because of the increasing numbers of survivors of childhood cancer, the need to find effective models for intervention and rehabilitation have become clear. The objectives of the multi-phased project are:
 - (1) To study the current population of children who have survived their cancers for 5 or more years; to understand the psychosocial impact of having life-threatening illness.
 - (2) From this in-depth study of patients and their families, to develop effective intervention from the time of diagnosis to prevent those sequelae found in the first population.
 - (3) To systematically assess the effectiveness of such intervention.
 - (4) To develop meaningful and appropriate rehabilitation methods throughout the course of the illness.
 - (5) To assemble the information learned, both in the areas of intervention and rehabilitation, and to disseminate that knowledge to other primary care physicians and institutions caring for such children.
8. Proposed Course: A survival registry will be established and maintained, with computerized input and retrieval systems. A pilot study will be executed to refine and operationalize specific assessment techniques. Patients will be evaluated by a multi-disciplinary team for medical psychological and social injury resulting from illness or therapy. When indicated, members of the team intervene to correct or ameliorate conditions identified in the study. From the information learned in the intensive study of long term survivors, intervention is planned for those children who will begin treatment as newly diagnosed patients.
9. Progress: Over 700 patients have been listed in the registry. Of 42 patients examined in the pilot study at least 80% had continuing

medical or physical rehabilitation needs. Financial problems persisted in 10% of cases. At least 30% had experienced difficulties in obtaining medical and/or life insurance. Psychological problems of a moderate to severe nature were manifest in 35% of patients. One or more types of intervention were made in 75% of cases.

10. Significance for Cancer Control: These studies will identify the necessity and effective interventions for correcting the long term sequelae of childhood cancer. This will provide direction for psychosocial rehabilitation and ultimately for primary prevention.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$107,372

GRANT SUMMARY

1. Title: A Regional Ambulatory Cancer Chemotherapy Program
2. Principal Investigator: Dr. James Battles
Ohio State University Cancer Center
1314 Kinnear Road
Columbus, Ohio 43212
3. Performing Organization: Ohio State University
4. Grant Number: 5-R18-CA-17942-02
5. Starting Date: 05/01/75 6. Expiration Date: 04/30/78
7. Objective: To develop a health care system in the region around the Ohio State University Cancer Research Center which will allow cancer patients to receive modern, up-to-date chemotherapy within a reasonable distance from their homes.
8. Proposed Course: This will be accomplished by initiating and supporting ambulatory oncology units in community hospitals in Central and South-eastern Ohio. These units will have facilities for administration of parenteral therapy, patient education, side effects monitoring, and continuing education in chemotherapy for physicians, nurses and pharmacists. Each will be under the direction of physicians in the local community.
9. Progress: During year 2 a fifth ambulatory chemotherapy unit was established. Because of increased patient loads, three of the original units have expanded to larger quarters and hired additional personnel. A sixth unit has been designated and four additional units are planned. These units presently handle 300 patient units per month. An active educational support program includes workshops for community physicians, quarterly meetings of the unit directors at the OSU Cancer Center, oncology nursing workshops, distribution of written education materials for physicians, nurses and other personnel, and patient education materials including slide/tapes and a coloring book for children.
10. Significance for Cancer Control: To demonstrate treatment and followup methods in leukemia and lymphoma.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$75,008

GRANT SUMMARY

1. Title: Regional Radiation Therapy Network Demonstration
2. Principal Investigator: Dr. James J. Fischer
Department of Therapeutic Radiology
Yale University School of Medicine
333 Cedar Street
New Haven, Connecticut 06570
3. Performing Organization: Yale University School of Medicine
New Haven, Connecticut 06570
4. Contract Number: 5-R18-CA-17941-02
5. Starting Date: 6/30/75
6. Expiration Date: 11/30/78
7. Objective: To develop an optimal pattern of interaction between Therapeutic Radiology departments in community hospitals and a major university center; to encourage the exchange of ideas, maintain patient care at a high quality level and facilitate clinical research.
8. Proposed Course: A regional network will be organized to bring to already high quality small community hospital radiation therapy departments those advantages inherent in a large research training center.
9. Progress: During the first year emphasis has been on radiologic physics and technical support programs. Dosimeters have been developed and distributed for comparing dosimetry at the various institutions. Technologists from the affiliated hospitals have visited Yale to attend lectures and conferences and to observe treatment techniques. Visits from the university have provided an outside evaluation of the needs of the participating radiotherapy departments and much needed equipment has been approved. Future directions will continue to be based on the needs and desires of the participating community radiotherapists. The program thus far has served to reduce the isolation experienced by the solo radiotherapists and has fostered an active exchange of information.
10. Significance for Cancer Control Program: To ensure that high quality radiation therapy is made available in community hospitals.
National Cancer Program Objective: C5 Approach: C5.3
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$133,245

GRANT SUMMARY

1. Title: Computer Assisted Evaluation of Patients with Cancer
2. Principal Investigator: Jane F. Desforges, M.D.
New England Medical Center Hospital
171 Harrison Avenue
Boston, Massachusetts 02111
3. Performing Organization: New England Medical Center Hospital
4. Grant Number: 1-R18-CA 19122-01
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/79
7. Objective: To apply the techniques of decision theory, information theory and statistical management to malignant diseases and to provide computerized programs of decision analysis which will be of practical use to physicians managing cancer patients.
8. Proposed Course: Using Hodgkin's Disease as a model, and data from major centers and the literature, develop and refine the decision tree to accurately reflect complexities of diagnostic evaluation and treatment decisions. When complete the system should:
 - 1) Provide information that permits the selection of an optimal sequence of staging procedures as determined by balancing accuracy and value against the risks of morbidity and mortality;
 - 2) Apply similar risk versus benefit analysis to treatment selection;
 - 3) Permit evaluation of new staging and treatment procedures for their relative expected impact on survival vs. morbidity; and
 - 4) Have interfacing capabilities which permit the practicing clinician to tailor the model to a particular patient and clinical setting.
9. Progress: The Hodgkin's disease decision tree and several computer programs have been developed. Evaluation of the utilities of points on the decision tree is underway using data from Stanford, the Harvard Joint Center, the New England Medical Center and from current literature. A new decision analysis program is being planned, focusing on a specific management problem, that of pulmonary infiltration in immunosuppressed patients.
10. Significance for Cancer Control Program: The alternatives available for pretreatment evaluation and treatment often make management decisions quite complex. Systems which permit more logical and

objective management of cancer patients will result in a higher quality of cancer care. A useful system for Hodgkin's disease will serve as a prototype for other malignancies and disease in general.

11. Project Officer: Donald N. Buell, M.D.

12. FY 1977 Funds: \$87,897

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Mary Brown
1275 York Avenue
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied Diseases
4. Contract Number: 45123
5. Starting Date: 06/01/74
6. Expiration Date: 05/31/77
7. Objective: Develop and implement in NCI-supported cancer centers comprehensive programs for training nurses in the specialized techniques and practices used in cancer patient care. Nursing personnel to be trained under the three year contract total 293.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of six weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project has completed its three year contract and has exceeded the contractual requirement of 293 trainees.

Six short-term continuing education courses for professional nurses were developed and implemented ranging in length from a one-week "Overview" course, through a three week "Speciality Course" to a six-week "Core Course" for university nursing faculty. A one-day seminar was conducted for Licensed Practical Nurses.

The major enrollment was in the one-week "Overview" course. The "Specialty" courses were adequately subscribed. About half of the trainees who have attended their courses are from community hospitals in the metropolitan area of New York City and the neighboring states of Connecticut and New Jersey. A quarter of the trainees are from medical centers from all across the country and the remaining quarter of trainees are from health agencies and educational institutions.

The design of all the curricula presented reflects the standard and typical approach to nursing education by the major cancer centers which is a didactic discussion of the institute's approach to the treatment of specific sites such as head and neck cancer, acute leukemia, Hodgkin's disease, etc.

Nursing and medical rounds were included as well as observational experiences and tours of special care areas, such as the radiation therapy department, the outpatient service, the intensive care unit, and the laminar air flow unit. The Bibliography is comprehensive and excellent and the trainees are also given a "soft cover" book, Guidelines for Comprehensive Care in Nursing Care in Cancer, a monograph on breast cancer, and an excellent extensive selection of pamphlets, reprints and appropriate journal articles that complements each course offering. A clinical practicum was included in the three week "Specialty" course and in the six-week courses.

In addition to the in-house education programs, project faculty are involved in many extramural programs for physicians, educators, and other health care professionals promoting oncology nursing. Faculty participate in seminars and workshops, some of which are sponsored by the ACS.

The combined impact of the course work and outreach programs should increase the understanding of the disease and treatment processes and the knowledge of new nursing practices that can be directly applied by the trainees.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
 2. Principal Investigator: Ms. Donna Diers
38 South Street
New Haven, Connecticut 06519
 3. Performing Organization: Yale University
 4. Contract Number: 45138
 5. Starting Date: 6/28/74 6. Expiration Date: 8/31/77
 7. Objective: To develop and implement in medical centers comprehensive training programs for nurses in specialized techniques and practices used in cancer patient care. Anticipated 250 students trained on this contract, registered professional nurses.
 8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 6 weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
 9. Progress: This project is in its third year of providing continuing education oncology nursing to Registered Nurses. The programs developed and implemented include: (1) a 4-week Core Course for registered nurses; (2) a 4-week Core Course for Nurse Educators and; (3) a one-week Health Assessment and Screening Training Experience (HASTE) course teaching Breast examination and Pap smear technique.
- A formative and summative evaluation methodology has been designed. Data collection schedules include three general classes of data: (1) opinion and perception data; (2) learning and attitude change data and (3) data concerning changes in nursing performance.
- Project faculty have provided consultation to community agencies who were planning cancer nursing education programs. For example with the American Cancer Society, in collaboration with the Connecticut Medical Oncology Society and the Yale Comprehensive Cancer Society, planned and conducted a 2-day Oncology Nursing Symposium.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Marilee Donovan
3017 Cathedral of Learning
Pittsburgh, Pennsylvania 15260
3. Performing Organization: University of Pittsburgh
4. Contract Number: 55186
5. Starting Date: 6/24/74 6. Expiration Date: 6/23/78
7. Objective: To develop and implement in medical centers and cancer centers comprehensive training programs for registered nurses and graduate nursing students in specialized techniques and practices used in cancer patient care. Anticipate 1200 trainees during the 3 year contract period.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for registered nurses and nursing students. At least one course should be a basic "core" course of 6 weeks. Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project is in its second year of operation. Two programs have been developed for the professional nurse: one in Master's level education and one in Continuing Education.

Students in the Medical-Surgical graduate program can select a functional area of oncology nursing concentration: clinical specialization, teaching or nursing administration. Nineteen graduate students have been enrolled thus far in the program.

The Continuing Education segment consists of 2 and 4 week Workshops and one-day seminars for staff nurses and inservice educators and a Nursing Techniques course for teaching PAP smear and breast examination. Five-hundred ninety nurses have enrolled thus far in these programs.

Project faculty outside the negotiated contract have developed a 10 one-hour tele-lecture series "Overview of the Problem of Cancer" for the West Virginia University school of Nursing.

They have also participated in outreach activities by providing consultative services to staff in a newly opened oncology nursing unit in a large city hospital.

10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: not yet negotiated

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Dr. Edna L. Fritz
1585 Neil Avenue
Columbus, Ohio 43210
3. Performing Organization: Ohio State University Research Foundation
4. Contract Number: 45128
5. Starting Date: 06/28/74
6. Expiration Date: 06/27/77
7. Objective: Develop and implement in NCI-supported cancer centers comprehensive programs for training nurses in the specialized techniques and practices used in cancer patient care. Anticipated 250 professional nursing students, undergraduate, graduate and registered professional nurses trained during this three year contract period.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of six weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: In its third year of operation, the Ohio State University Oncology Nursing Program has continued to develop and augment courses in all aspects of oncology nursing. The major objective of the program is to expand existing programs designed to be responsive to the needs of the citizenry of Ohio. Improvement in the quantity and quality of care and services provided to persons with cancer, their families and their communities would be achieved by contributing to the education of professional nurses; 1) in the extended roles of clinical specialist in oncological nursing; 2) who are nursing school faculty members, and 3) who are practitioners in hospitals and agencies that serve cancer patients throughout the state of Ohio. Additionally, the program is designed to contribute to the education of undergraduate and graduate students of nursing, licensed practical nurses and to the training of nurse aides and orderlies. To this end two structurally distinct curricula were designed; 1) a curriculum composed of short-term experiential and didactic workshops, and 2) modular quarter-credit courses.

The curricula provide an integrated overview of the pathophysiology of cancer, modes of therapy, modes of cancer detection and control, psychosocial aspects of the cancer problem, rehabilitation and nursing intervention. Each course in the oncology nursing curricula is presented in modular units which permits students the flexibility of independent

study and self-pacing. In this environment students are encouraged to develop their unique areas of interest and within defined limits may progress at their own rate. By assuming responsibility for the acquisition of knowledge and skills necessary to practice oncology nursing, students are active participants in the learning process.

The faculty are actively involved in outreach activities related to cancer control, participating in community oncology in-service programs and in providing consultative services for another university school of nursing in the development of oncology curricula. They are also involved with the local ACS as planners and speakers in various seminars.

The contractor has exceeded the contractual requirement of 250 trainees for the three year period.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Ms. Renilda Hilkemeyer
M.D. Anderson Hospital and Tumor
Institute
Houston, Texas 77025
3. Performing Organization: University of Texas System Cancer Center
4. Contract Number: 45127
5. Starting Date: 6/28/74
6. Phase Out Date: 11/30/76
7. Objective: Develop and implement in NCI-supported cancer centers comprehensive training programs for nurses in the specialized techniques and practices used in cancer patient care. Nursing personnel to be trained under this contract in three years number 250.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of six weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project experienced serious student recruitment problems which prevented the contractor from meeting the requirements of the negotiated contract. Consequently, a merit review recommended that it be phased out.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.
National Cancer Program Objective: C5 Approach: C5.5
11. Project Officer: Janet L. Lunceford, R.N.
12. FY 1977 Funds: No 1977 funds

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Ms. Erica Janzen
Department of Oncology
5050 Cass Avenue
Detroit, Michigan 48201
3. Performing Organization: Wayne State University
4. Contract Number: 55239
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To develop and implement in medical centers a comprehensive training program for registered nurses in specialized techniques and practices used in cancer patient care. It is anticipated that 510 registered nurses and nurse educators will participate in courses offered during 3 year contract period.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 6 weeks. Their course work is for the registered nurses only. Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project is in its second year of operation. A six-week "core" course for registered nurses and for nurse educators has been developed and implemented. Three-week specialty courses in Pediatric Oncology, and in Chemotherapy/Radiotherapy were also developed and offered for registered nurses. A two-week general course for Licensed Practical Nurses presented in the Detroit area and one-week workshops presented in areas throughout the state comprise the curriculum.

Project faculty have participated in professional seminars, community and church groups, giving "talks" that addressed the problems and approaches relating to terminally ill patients and their families.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: not yet negotiated

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Dr. Norma Kolthoff
1402 University Avenue
Madison, Wisconsin 53706
3. Performing Organization: University of Wisconsin
4. Contract Number: 45115
5. Starting Date: 06/01/74
6. Expiration Date: 08/31/77
7. Objective: Develop and implement in NCI-supported cancer centers comprehensive training programs for nurses in the specialized techniques and practices used in cancer patient care. During the three year contract 2,856 nursing personnel are to be trained. Programs are designed for professional undergraduate and graduate nursing students, registered professional nurses, licensed practical nurses and nurses' aides.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of six weeks (240 hours). Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: The Oncology Nursing Program, in its third year of operation at the School of Nursing, University of Wisconsin at Madison, is directed toward the preparation of baccalaureate and master's degree students in cancer nursing. The cancer component in undergraduate and graduate programs is being strengthened by the offering of two credit courses which may be elected by upper level undergraduate students and graduate students. In addition, continuing education programs are being provided for teachers of cancer nursing, and for professional nurses, licensed practical nurses and nurses' aides who provide care for cancer patients.

All project personnel contribute to both the undergraduate and graduate programs in the School by involvement in the curriculum planning, consultation with other faculty members, teaching selected aspects on cancer nursing in the ongoing courses, and advisement of students. A variety of educational experiences provide a more concentrated focus on cancer nursing. These include courses, workshops, teleconferences, and independent study. The offerings are appropriate for more than one group of nurses.

10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Ms. Darlene Peay
Salt Lake City, Utah 84112
3. Performing Organization: University of Utah
4. Contract Number: 45141
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/78
7. Objective: Develop and implement in medical centers comprehensive training program for nurses in the specialized techniques and practices used in cancer patient care. Anticipated 394 registered professional nurses and professional nursing students trained under this 3-year contract.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 6 weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project is currently in its third year of providing oncology nursing training to Registered Nurses and undergraduate nursing students. The curricula developed and presented under this program have included: (1) a four-week core course; (2) a one semester (3 credit) evening course in Oncology Nursing; (3) three one-week seminars in Psychosocial Aspects of Cancer, Community Aspects of Cancer and Pediatric Oncology; and (4) a 3-day workshop for Family Nurse Practitioners.

The outreach activities under the program have included development and implementation of 2-day workshops in cancer nursing in four rural areas of Utah. Twenty-two (22) mediated lessons (video, audio slide-sound) with the content geared for a variety of "target" groups including nurses, patients and their families have been developed. Forty-one copies have been placed in various health care agencies. A resource booklet entitled "Living with your Colostomy" was developed. Over 300 copies have been distributed (upon request) many utilized by patients who have had surgery which necessitated a colostomy.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Program in Cancer Centers/Medical Centers
2. Principal Investigator: Susan Sverha
37th and O Streets, N.W.
Washington, D.C. 20057
3. Performing Organization: Georgetown School of Nursing
4. Contract Number: 55240
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To develop and implement in community hospitals comprehensive training programs for nursing personnel in specialized techniques and practices used in cancer patient care. Anticipate a maximum of 407 trainees, including registered professional nurses, licensed practical nurses, nurses aides and volunteers.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 6 weeks (240 hours). Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibilities in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project is in its second year of operation. Progress has been made towards developing a program of oncology nursing education both at the baccalaureate level and through in-service programs. Program implementation has been successful in presenting the following: a six week Core course for 25 registered nurses; 10-week Core course for 60 registered nurses; 4-week Educator course for 22 nurse faculty; 3-credit Clinical Elective Course for 12 baccalaureate nursing students; 2-week specialty courses (5 different subject areas) for 60 registered nurses and; five one-day workshops for 71 licensed practical nurses.

The project faculty, recognizing community needs, have conducted three workshops outside the negotiated workscope of the contract with a total enrollment of 140 registered nurses.

Project faculty have also been instrumental in promoting and assisting in the organization of the Association of Washington Area Cancer Nurses and in helping nursing students who are interested in cancer nursing form an organization called the HeLa Society.

10. Significance for Cancer Control Program: To demonstrate treatment and followup care methods in multiple sites.

National Cancer Program Objective: C5 Approaches: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: not yet negotiated

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Ms. Jeanne Valencius
635 Commonwealth Avenue
Boston, Massachusetts 02215
3. Performing Organization: Boston University
4. Contract Number: 55142
5. Starting Date: 10/15/74 6. Expiration Date: 10/14/77
7. Objective: Develop and implement in NCI-supported cancer centers comprehensive programs for training nurses in the specialized techniques and practices used in cancer patient care. Anticipated 250 professional nurse trainees during the three year contract period.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of six weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: A curriculum in Oncology Nursing, primarily short-term continuing education courses and workshops for professional nurses, has been developed and implemented during the contract period. These courses range in length from a one-week Overview, to a three week Clinical Course in Adult Medical-Surgical Oncology Nursing (one-week overview course a pre-requisite). A Master's level (six-week) course in which participants earn 4 academic credits toward a Master of Science degree in nursing has also been implemented.

All courses relate principles of cellular kinetics and biology to theories of carcinogenesis, metastasis and the process of malignancy. Diagnosis and treatment schemes are reviewed in relation to current research developments. Epidemiological factors influencing prevention and detection as well as nursing interventions associated with acute, chronic, and terminal stages of illness are discussed. A clinical practicum is arranged for the three week and the master's level course.

The contractor has exceeded the contract requirement of 250 trainees for the three year period. A majority of the participants are from Massachusetts but 32 trainees from 15 different states have also enrolled in the program.

Project faculty have been actively involved in numerous outreach

activities by: 1) participating as speakers in symposia; 2) providing consultation in oncology nursing curricula development to schools of nursing and; 3) publishing papers.

10. Significance for Cancer Control Program: Treatment and follow-up care methods in multiple sites.

National Cancer Program Objective: C5 Approach C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Cancer Centers/Medical Centers
2. Principal Investigator: Ms. Dorothy T. Wilson
666 Elm Street
Buffalo, New York 14203
3. Performing Organization: New York State Department of Health
Roswell Park Division
4. Contract Number: 55063
5. Starting Date: 9/1/74 6. Expiration Date: 8/31/77
7. Objective: To develop and implement in medical and cancer centers comprehensive programs for training nurses in specialized techniques and practices used in cancer patient care. Anticipated 280 registered professional nurses and undergraduate nursing students trainees during 3-year period of contract.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 6 weeks (240 hours). Longer continuing education courses may be provided. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: The project is in its third year of operation. Since its inception, oncology nursing curricula have been developed and presented to Registered Nurses, Nurse Educators, Practical Nurses and baccalaureate nursing students. A variety of "core" courses provided under the program have included: a 4-week core course for Registered Nurses; a 2-week core course for staff nurses from hospitals and public health agencies; a two-week core course for staff nurses from nursing homes and extended care facilities; and courses for Licensed Practical Nurses. A 6-week work study program was also conducted for senior baccalaureate nursing students. All project staff participate in outreach activities by participating in and planning for Oncology Nursing Seminars throughout the state.
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Community Hospitals
2. Principal Investigator: Dr. Carl W. Boyer, Jr.
P. O. Box 861
Honolulu, Hawaii 96808
3. Performing Organization: Queen's Medical Center
4. Contract Number: 45153
5. Starting Date: 6/28/74 6. Expiration Date: 6/27/77
7. Objective: To develop and implement in community hospitals comprehensive training programs for nurses in specialized techniques and practices used in cancer patient care. Under this 3-year contract 250 nurses are to be trained.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 2 weeks (80 hours). Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project has completed its three year contract. Contractual obligations have been met. An eighty (80) hour basic "core" course was developed and implemented. Three-day (3) workshops were presented in each of the neighbor islands. One (1) and two (2) day seminars were offered for the graduates of the Core course. A six-week work-study program for baccalaureate nursing students was also developed and presented, July and August, 1976. All educational offerings were approved by the Hawaii State Board of Nursing for CERP (Continuing Education Recognition Points).
10. Significance for Cancer Control Program: To demonstrate treatment, followup and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5
11. Project Officer: Ms. Lunceford
12. FY 1976 Funds: \$58,487

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Community Hospitals
2. Principal Investigator: Dorothy Howard
1566 Lafayette Street
Denver, Colorado 80218
3. Performing Organization: Colorado Regional Cancer Center
4. Contract Number: 65185
5. Starting Date: 06/22/75
6. Expiration Date: 07/21/77
7. Objective: Develop and implement a community hospital comprehensive training program for registered nurses and licensed practical nurses in the specialized techniques and practices used in cancer patient care. During the three year contract 360 nursing personnel are to be trained.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of 80 hours. Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project has completed its second year of operation. It has provided a phased three-week (120 hour) core course (a two-week session followed by a one-week session, six months later) to 139 registered nurses. A one-week (40 hour) course has also been developed and implemented for 73 Licensed Practical Nurses. Four one-day outreach seminars in oncology nursing have been conducted annually throughout the state of Colorado.

The outreach activities under this project have involved all faculty members as speakers at regional meetings of the American Cancer Society (ACS) and at Colorado Nurses' Association meetings on subjects related to oncology nursing.
10. Significance for Cancer Control Program: To demonstrate treatment, follow-up and continuing care methods in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: not yet negotiated

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Community Hospitals
2. Principal Investigator: Ms. Alice J. Labadie
1120 South Utica Avenue
Tulsa, Oklahoma 74104
3. Performing Organization: Hillcrest Medical Center
4. Contract Number: 55181
5. Starting Date: 10/01/74 6. Expiration Date: 09/30/77
7. Objective: To develop and implement in community hospitals comprehensive training programs for nurses in specialized techniques and practices used in cancer patient care. Under this three-year contract 325 nursing personnel are to be trained.
8. Proposed Course: Initiate and develop new educational programs, or expand existing programs for nursing personnel. At least one course should be a basic "core" course of two weeks (80 hours). Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: The oncology nursing program at the Hillcrest Medical Center is in its third year of providing oncology education to Registered Nurses, Licensed Practical Nurses, and paramedical personnel. The curriculum design consists of: 1) basic 80 hour core course, "Problem Oriented Care of the Cancer Patient", for Registered and Licensed Practical Nurses; 2) a paramedical course 20 hours in length, and 3) one-day symposia. The core course was offered in three optimal time plans to accommodate the differences in working hours of the various participants.
10. Significance for Cancer Control Program: To demonstrate treatment and follow-up care methods in multiple sites.

National Cancer Program Objective: C5 Approach C5.5
11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Oncology Nursing Programs in Community Hospitals
2. Principal Investigator: Ms. Charlotte C. Wright
64 Robbins Street
Waterbury, Connecticut 06720
3. Performing Organization: Waterbury Hospital Health Center
4. Contract Number: 45135
5. Starting Date: 06/28/74
6. Expiration Date: 06/27/77
7. Objective: To develop and implement in community hospitals continuing education programs for nursing personnel in specialized techniques and practices used in cancer patient care. Anticipated 1500 trainees, including Registered Professional Nurses, Licensed Practical Nurses, nurses aides and volunteers.
8. Proposed Course: Initiate and develop new educational programs in oncology nursing and/or expand existing programs for nursing personnel. At least one course should be a basic "core" course of two weeks (240 hours). Longer continuing education courses may be provided. At least one course should make provisions for Licensed Practical Nurses and/or Licensed Vocational Nurses. The program will emphasize the nursing aspects of treatment, rehabilitation and long-term care of cancer patients as well as nursing responsibility in prevention, screening, detection and supportive care of patients and families.
9. Progress: This project is in its third year of operation. The educational effort has been diverse and has included programs for professional and non-professional nursing personnel as well as for lay individuals who interface with cancer patients. Their curriculum for the various course offerings reflects creativity and innovation, which is directly influenced by the dedication and enthusiastic leadership of the principal investigator. A typical example of their approach are the R.N. Seminars conducted for the R.N. trainees who have completed the initial 80 hour Core course. These eight three-hour seminars conducted over a seven month period are designed to reinforce new knowledge, concepts and attitudes with more in-depth approaches. This, of course, affords the Project ONE (oncology nursing education) faculty an opportunity to continue contact with the trainees and to maintain their interest and motivation in oncology nursing. Faculty also provide a follow-up consultation and supervision of students in clinical and teaching situations on an ad hoc basis. The contractor has exceeded contract requirements (no. of trainees) since course implementation. It is anticipated that over 3,000 professional, non-professional nursing personnel and lay individuals will have participated.

An extensive outreach program has developed. Faculty members are involved as ACS Board Members, ACS Education Committee members, etc. For example, members have assisted in statewide programs in breast examination and in cancer nursing seminars.

10. Significance for Cancer Control Program: To demonstrate treatment and follow-up care in multiple sites.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Enterostomal Therapy Education Program
2. Principal Investigator: Ms. Renilda Hilkemeyer
M. D. Anderson Hospital and Tumor Institute
Houston, Texas 77025
3. Performing Organization: University of Texas
4. Contract Number: 45111
5. Starting Date: 6/1/74 6. Expiration Date: 5/31/77
7. Objective: Develop new centers including course material, staff and facilities for the education and training of enterostomal therapists. This contract to train a total of 56 therapists over duration of contract.
8. Proposed Course: The contractor will develop training aids and will design an intensive 6-week course curricula for training of enterostomal therapists which will be concerned with the physical, psychological, social and economic needs of patients.
9. Progress: A 6-week course was developed and implemented in accordance with the requirements of the IAET (International Association of Enterostomal Therapists) and provided a good balance between the didactic and clinical approach to education.

The project staff has initiated several outreach educational programs for the Visiting Nurse Associates, other hospitals, schools of nursing, IAET, and local groups interested in enterostomal therapy.

10. Significance for Cancer Control Program: To demonstrate rehabilitative methods in the colon and rectum.

National Cancer Plan Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Enterostomal Therapy Education Program
2. Principal Investigator: Dr. William C. McGarity
Atlanta, Georgia 30322
3. Performing Organization: Emory University
4. Contract Number: 45102
5. Starting Date: 6/1/74
6. Expiration Date: 5/31/77
7. Objective: Develop new centers, including course material, staff and facilities, for the education and training of enterostomal therapists. Operate five 6-week training courses each year and train a minimum of 30 persons each year.
8. Proposed Course: The contractor will develop training aids and design an intensive 6-week course curricula for training of enterostomal therapists which will be concerned with the physical, psychological, social and economic needs of the patient.
9. Progress: A six-week course approved by the IAET (International Association of Enterostomal Therapists) and is a joint effort between the Emory University School of Medicine, School of Nursing and the Division of Nursing of Emory University Hospital. Students completing the training programs have backgrounds in the rehabilitation process, current concepts of Skin barriers, pouches, development of educational programs, methods of recording statistical data, and a resource library for patients and staffs.

The project faculty have participated in many community education projects, hospital in service programs, ACS seminars and workshops. Additionally, programs are conducted monthly for the surgical house staff and nursing staff. They have also collaborated with the IAET in a number of symposia for nurses on ostomy care.
10. Significance for Cancer Control Program: To demonstrate rehabilitative methods in the colon and rectum.

National Cancer Program Objective: C5 Approaches: C5.5
11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Enterostomal Therapy Education Programs
2. Principal Investigator: Ms. Pamela Gaherin Watson
881 Commonwealth Avenue
Boston, Massachusetts 02215
3. Performing Organization: Boston University
4. Contract Number: 45112
5. Starting Date: 06/28/74
6. Expiration Date: 08/31/77
7. Objective: Develop new centers including course material, staff and facilities for the education and training of enterostomal therapists. This program is to train a total of 105 therapists over duration of contract.
8. Proposed Course: The contractor developed an intensive six-week course which incorporates both recognized practices of medical-surgical nursing, oncology nursing, and the technical aspects of care associated with stoma management, so as to effect the optimal recovery of the patient, and his return to family and community.
9. Progress: Course implementation and recruitment level has been accomplished as contracted. All courses have been filled and even oversubscribed. Seventy-five written requests for program admission have been received since the final three courses under contract have been filled. 92 registered nurses have been graduated and they will exceed the number of trainees required by the three year contract (105). Project staff have been instrumental in establishing a follow-up clinic for stoma patients at the Boston University Medical Center.

The following lists publications of project faculty and by a graduate of one of the Stoma Programs:

Pamela Gaherin Watson:

Book Review: Modern Stoma Care. Edited by Frank C. Walker, Edinburgh, G.B., Churchill Livingstone, Medical Division of Longman Group Limited, 1975. Requested by Archives of Physical Medicine and Rehabilitation.

"Cellular Proliferation in the Male Genitourinary Tract" in Medical Surgical Nursing - A Conceptual Approach. Edited by Dorothy Jones, et al, McGraw Hill Publishers, to be published in 1978.

"Applying Rehabilitation Concepts in The Care of Persons With Ostomies, accepted for publication by Association of Nursing Journal, to appear in January 1977.

"Comprehensive Care of the Ileostomy Patient", Nursing Clinics of North America, II:3, September, 1976.

Robin Young Wood:

"Catheterizing the Patient with an Ileal Conduit Stoma", American Journal of Nursing, (October, 1976).

"Bacterial Growth in Urine Collected in Ileal Loop Receptacles", letter to the Editor, Urology, II:5 (May, 1976)

"Post-Operative Considerations for Persons with Stomas", (a video-tape produced for Boston University School of Nursing)

Karla Rose: (unpublished articles to be submitted for publication during the next six month period)

"The Stress of Chemotherapy"

"A Patient's Guide to Chemotherapy"

"A Documentation Tool for Patients Receiving Chemotherapy"

"Pre-Operative Considerations for Persons with Stomas," a video tape produced for (Boston University School of Nursing)

Student Publication:

A Guide to Ostomy Care by Joanne Mahoney, R.N., published by Little, Brown Publishing Company.

10. Significance for Cancer Control Program: To demonstrate rehabilitative methods in cancer of the colon and rectum.

National Cancer Program Objective: C5 Approach: C5.5

11. Project Officer: Ms. Lunceford

12. FY 1977 Funds: -0-

CONTRACT SUMMARY

1. Title: Development and Evaluation of Cancer Care Coordinating Team
2. Principal Investigator: Dr. Norman Oishi
1301 Punchbowl Street
Honolulu, Hawaii 96813
3. Performing Organization: Queen's Medical Center
4. Contract Number: 65197
5. Starting Date: 2/6/76
6. Expiration Date: 2/5/79
7. Objective: The objective of this project is to develop and field test two teams of two public health nurses to coordinate cancer patient care, both in-patient and out-patient, to optimize the utilization of available facilities and services. These teams will provide liaison services prior to hospital admission, when appropriate. Discharge planning will begin on admission. The team will remain in contact with the patient during hospitalization and provide follow-up in home and in the clinic after discharge. The teams shall serve as the primary patient contact for all problems that are not specifically dealt with by the patient's physician.
8. Proposed Course: During the first year of operation a ten member multidisciplinary team was chosen for the project and received an 80 hour pre-service training program. The disciplines represented by the team are: social work, dietician, clergy, physical and occupational therapy, nursing (chemotherapy, enterostomal therapy and psychiatric) and radiotherapy technology. Four registered nurses with a public health nursing background completed a six-month training program in Oncology Nursing. The curriculum designed by the project director, in consultation with the University of Hawaii School of Nursing, was awarded 509 Continuing Education Units by the Hawaii State Board of Nursing. The training program included a well designed comprehensive course in all aspects of cancer and cancer patient care. A clinical experience with cancer patients in the hospital, in the out-patient department and in a physician's office was provided.
9. Progress: Patient accrual began January 3, 1977. The number of patient referrals to the project has increased monthly. For example, the average "case load" for each nurse has increased markedly since this date, from 6.5 patients in January to 21.2 patients in March. Within the first four months of operation, protocols for management and evaluation criteria have been set and the maximum case load has been met. Many patients require home visits to provide continuity of care since most of the patients referred thus far have recurrent and/or advancing disease. A "Resource Directory for Cancer Patients in Hawaii" was developed by project staff. The directory is indexed

and cross references 48 different agencies. It has been distributed to ten various hospitals and agencies in Honolulu as a community service.

10. Significance for Cancer Control: To demonstrate continuing care methods and their benefits to cancer patients and their problems.

National Cancer Program Objectives:

Approaches:

11. Project Officer: Ms. Lunceford
12. FY 1977 Funds: \$86,572

CONTRACT SUMMARY

1. Title: Delaware Valley Pediatric Oncology Program and Central Tumor Registry
2. Principal Investigator: Dr. Audrey Evans
18th and Bainbridge Streets
Philadelphia, Pennsylvania 19146
3. Performing Organization: Children's Hospital of Philadelphia
4. Contract Number: 55258
5. Starting Date: 6/30/75 6. Expiration Date: 8/31/77
7. Objective: To establish the average annual incidence rate for specific histologic types of cancer in children and produce the evidence, if any, of differences in survival according to whether the first definitive course of therapy was received at a cancer center or at a community hospital.
8. Proposed Course: Devise and test the feasibility of establishing and utilizing a data collecting system for pediatric malignant diseases within a prescribed geographic area for which the resident population is known from publications of the 1970 census. Design appropriate reporting forms containing suitable information concerning all forms of cancer in persons under the age of 15 years. Also to develop an effective central pediatric tumor registry within a prescribed geographic area.
9. Progress: The tumor registry has abstracted 1862 cases of childhood cancer accounting for virtually all cases in their geographic area during the interval June 1, 1970 through December 31, 1975. Data has been collected, coded and stored for computer analysis. The registry is well established and accepted and has served as a valuable resource for clinicians caring for their patients. Referral patterns derived from the registry have enabled the Pediatric Oncology Program to more effectively allocate personnel and resources in enlarging their satellite clinic program.
10. Significance for Cancer Control Program: To establish incidence rates for pediatric tumors and determine influencing treatment factors on survival times.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: No 1977 Funds.

CONTRACT SUMMARY

1. Title: Study of the Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed In Utero to Synthetic Estrogens
2. Co-Principal Investigators: Dr. Anne Barnes
Dr. Stanley Robboy
Boston, Massachusetts 02114
3. Performing Organization: Massachusetts General Hospital
4. Contract Number: 45157
5. Starting Date: 6/27/74
6. Expiration Date: 6/26/81
7. Objective: The aim of the DESAD (DES-Adenosis) project is to assess, comprehensively, the magnitude and severity of the health hazards to DES exposed female offspring which may have resulted from the administration of exogenous, synthetic estrogens to their mothers. Prevalence and incidence rates of vaginal epithelial changes will be determined.
8. Proposed Course: Through the joint efforts of four institutions these objectives will be accomplished through identification of a minimum of 2000 females project wide, with documented DES exposure, 500 of whom are identified from prenatal record review. These individuals will be examined (includes both colposcopy and histopathology) through long-term followup for the development of cancer and pre-cancerous lesions of the genital system. Treatment is provided if necessary. Nonexposed subjects who are matched to the exposed record-review participants serve as controls.
9. Progress: The project protocol, which presents the project's background and rationale, together with project aims, program design and procedures for participant recruitment and followup, has been designed and is being implemented by all four cooperating institutions.

All exams are conducted according to the details in the Manual of Procedures. Standardized forms for recording patient data have been designed and are currently used.

As of April 1977, over 3814 persons have been enrolled, project wide; approximately 300 are controls.

Massachusetts General Hospital has enrolled 939 participants of which 24 are controls.

10. Significance for Cancer Control Program: To provide a documented data base for program implementation in both detection and treatment for a suspected high risk population.

National Cancer Program Objective: C5

Approaches: C5.1, C5.2

11. Project Officer: Mary Ann Sestili, Ph.D.

12. FY 1977 Funds: \$269,548

CONTRACT SUMMARY

1. Title: Study of the Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed In Utero to Synthetic Estrogens
2. Principal Investigator: Dr. Raymond H. Kaufman
1200 Moursund Avenue
Houston, Texas 77025
3. Performing Organization: Baylor College of Medicine
4. Contract Number: 45092
5. Starting Date: 6/24/74
6. Expiration Date: 6/23/81
7. Objective: The aim of the DESAD (DES-Adenosis) project is to assess, comprehensively, the magnitude and severity of the health hazards to DES exposed female offspring which may have resulted from the administration of exogenous, synthetic estrogens to their mothers. Prevalence and incidence rates of vaginal epithelial changes will be determined.
8. Proposed Course: Through the joint efforts of four institutions these objectives will be accomplished through identification of a minimum of 2000 females project wide, with documented DES exposure, 500 of whom are identified from prenatal record review. These individuals will be examined (includes both colposcopy and histopathology) through long-term followup for the development of cancer and pre-cancerous lesions of the genital system. Treatment is provided if necessary. Nonexposed subjects who are matched to the exposed record-review participants serve as controls.
9. Progress: The project protocol, which presents the project's background and rationale, together with project aims, program design and procedures for participant recruitment and followup, has been designed and is being implemented by all four cooperating institutions.

All exams are conducted according to the details in the Manual of Procedures. Standardized forms for recording patient data have been designed and are currently used.

As of April 1977, over 3814 persons have been enrolled, project wide; approximately 300 are controls.

Baylor has enrolled 854 participants, 74 of which are controls.

10. Significance for Cancer Control Program: To provide a documented data base for program implementation in both detection and treatment for a suspected high risk population.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$158,182

CONTRACT SUMMARY

1. Title: Study of the Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed In Utero to Synthetic Estrogens
2. Principal Investigators: Dr. Leonard Kurland (Coordinating Center)
Dr. David Decker (Local Center)
200 First Street, S.W.
Rochester, Minnesota 55901
3. Performing Organization: Mayo Foundation
4. Contract Number: 45124
5. Starting Date: 6/1/74
6. Expiration Date: 6/30/81
7. Objective: The aim of the DESAD (DES-Adenosis) project is to assess, comprehensively, the magnitude and severity of the health hazards to DES exposed female offspring which may have resulted from the administration of exogenous, synthetic estrogens to their mothers. Prevalence and incidence rates of vaginal epithelial changes will be determined.
8. Proposed Course: Through the joint efforts of four institutions these objectives will be accomplished through identification of a minimum of 2000 females project wide, with documented DES exposure, 500 of whom are identified from prenatal record review. These individuals will be examined (includes both colposcopy and histopathology) through long-term followup for the development of cancer and pre-cancerous lesions of the genital system. Treatment is provided if necessary. Nonexposed subjects who are matched to the exposed record-review participants serve as controls.
9. Progress: The project protocol, which presents the project's background and rationale, together with project aims, program design and procedures for participant recruitment and followup, has been designed and is being implemented by all four cooperating institutions.

All exams are conducted according to the details in the Manual of Procedures. Standardized forms for recording patient data have been designed and are currently used.

As of April 1977, over 3814 persons have been enrolled, project wide; approximately 300 are controls.

Mayo Foundation has enrolled 794 participants of which 104 are controls.
10. Significance for Cancer Control Program: To provide a documented data base for program implementation in both detection and treatment for a suspected high risk population.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Mary Ann Sestili, Ph.D.

12. FY 1977 Funds: \$332,240

CONTRACT SUMMARY

1. Title: Study of the Incidence and Natural History of Genital Tract Anomalies and Cancer in Offspring Exposed In Utero to Synthetic Estrogens
2. Principal Investigator: Dr. Duane Townsend
California Hospital Medical Center
Los Angeles, California 90015
3. Performing Organization: University of Southern California
4. Contract Number: 45122
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/81
7. Objective: The aim of the DESAD (DES-Adenosis) project is to assess, comprehensively, the magnitude and severity of the health hazards to DES exposed female offspring which may have resulted from the administration of exogenous, synthetic estrogens to their mothers. Prevalence and incidence rates of vaginal epithelial changes will be determined.
8. Proposed Course: Through the joint efforts of four institutions these objectives will be accomplished through identification of a minimum of 2000 females project wide, with documented DES exposure, 500 of whom are identified from prenatal record review. These individuals will be examined (includes both colposcopy and histopathology) through long-term followup for the development of cancer and pre-cancerous lesions of the genital system. Treatment is provided if necessary. Nonexposed subjects who are matched to the exposed record-review participants serve as controls.
9. Progress: The project protocol, which presents the project's background and rationale, together with project aims, program design and procedures for participant recruitment and followup, has been designed and is being implemented by all four cooperating institutions.

All exams are conducted according to the details in the Manual of Procedures. Standardized forms for recording patient data have been designed and are currently used.

As of April 1977, over 3814 persons have been enrolled, project wide; approximately 300 are controls.

University of Southern California has enrolled 1122 participants, 58 of which are controls.
10. Significance for Cancer Control Program: To provide a documented data base for program implementation in both detection and treatment for a suspected high risk population.

National Cancer Program Objective: C5 Approaches: C5.1, C5.2

11. Project Officer: Mary Ann Sestili, Ph.D.

12. FY 1977 Funds: \$201,933

GRANT SUMMARY

1. Title: Clinical and Research Radiation Therapy in Cancer Care
2. Principal Investigator: Dr. Simon Kramer
Department of Radiation Therapy
Thomas Jefferson University Hospital
1025 Walnut Street
Philadelphia, Pennsylvania 19107
3. Performing Organization: Thomas Jefferson Medical College and
The American College of Radiology
4. Grant Number: 5-R18-CA15978-03
5. Starting Date: 3/1/75
6. Expiration Date: 2/28/79
7. Objective: To determine the existing patterns and standards of radiation therapy, to determine the influence of educational and geographical factors in the level of care, to relate the outcomes of therapy to variations in the quality of care and to develop programs to increase the quality of radiation therapy throughout the country.
8. Proposed Course: This study will include: (1) an analysis of patterns and competence of radiation therapy as they exist today; (2) the establishment of standards of radiation therapy care, and (3) the establishment of guidelines for the organization of cancer management systems.
9. Progress: During the first two years of this grant, 168 representative radiotherapy services were surveyed and decision trees and a definition of best current management defined for 5 tumor sites as well as patterns of variations from optimum management. Continued funding will permit an enlargement in scope to include: (1) continuation of the study for 5 additional sites, (2) an analysis of the outcomes of treatment and its relation to variations in care, (3) a study of utilization and referral patterns, (4) development of improved multidisciplinary referral systems, and (5) developing and implementing education programs with the aim of improving the quality of radiation care nationwide.
0. Significance for Cancer Control Program: To evaluate and promote quality radiation therapy in the management of the cancer patient.

National Cancer Program Objective: C5 Approach: C5.2

1. Project Officer: Donald N. Buell, M.D.
2. FY 1977 Funds: \$1,570,000



REHABILITATION AND CONTINUING CARE PROGRAM

Rehabilitation of the cancer patient has become an urgent challenge, due to the increasing numbers of patients whose disease has been successfully treated and controlled. If past trends continue, there are 54 million Americans alive today who are destined to develop cancer during their lifetime. The number per year is approximately 700,000 and almost four out of ten will survive five years or more. The other six will also live longer periods of time within the five years, due to detection at earlier stages of development and improved treatments.

The survival of cancer patients, however, is not the same as total recovery. The consequences of the disease and treatment will create a wide variety of severe and chronic impairments with corresponding rehabilitation needs. Although the cancer may be considered "cured," the patient frequently becomes unproductive and fails to achieve the maximum possible physical restoration and social function. There is the necessity for a total rehabilitation program to ensure that controlled cancer patients move from the pretreatment stage through the posttreatment period in such a way as to permit the maximum resumption of the activities of daily living.

Until recent years, cancer patients considered for their rehabilitation potential were those with laryngectomy, mastectomy, ostomy surgeries and amputation. The current progress in the treatment of all cancers has resulted in a growing number of successfully treated cancer patients who enjoy increased longevity because of improved methods of disease control. This continued progress in cancer treatment demands comparable progress in the approaches to cancer rehabilitation.

To approach these needs, the Rehabilitation and Continuing Care Program of DCCR includes a variety of projects that provide field tests and demonstrations of a full range of rehabilitation and continuing care interventions. Programs provide systematic approaches to early and continued rehabilitative support during: 1) hospitalization; 2) post-hospitalization through out-patient clinics and at-home services; and 3) when under continuing, supportive care, through "hospices." All are aimed at achieving the best possible functional status and/or well-being through comprehensive support, including help with cancer-related physical, psychological, social and vocational problems.

DCCR's activities in rehabilitation are structured to meet two major areas of the National Cancer Program. Field test, demonstration, and promotion projects have been formulated to meet rehabilitation and continuing care objectives set forth in the Cancer Control Program portion of the National Cancer Program Plan. Basic and applied research projects are being conducted to fulfill the objective of the rehabilitation research thrust of the National Cancer Program Plan. Although closely related by programmatic responsibility and organizational structure, these two areas are presented separately in the following discussions.

The basic objective of the projects in the Rehabilitation and Continuing Care Program area is to identify and promote optimal restorative, palliative and continuing care methods and techniques for use with, and by, cancer patients.

Specialized Rehabilitation and Terminal Care Facilities

The two projects in Development and Utilization of Rehabilitation and/or Continuing Care Resources and Services, are concerned with identifying the resources, facilities, services and personnel needed for the supportive and continuing care programs for cancer patients in all stages of their illness. These projects identify needs, problems and resources, and promote more effective approaches through demonstrations in specialized cancer care programs.

The first of these two projects deals with out-patients in clinics or at-home, using multidisciplinary teams oriented to the type of patients by cancer site. Head and neck, pediatric, breast, and other site-oriented teams were formed, identifying and providing care to over 1,200 patients. This program demonstrated methods to fill the gaps between treatment and rehabilitation, and demonstrated the value of a coordinated, well-structured program to ensure that the most effective rehabilitation methods were made available to and were utilized by an increased number of cancer patients.

The second project is concerned with field testing and demonstrating the "hospice" concept for use with certain cancer patients in the United States.

The hospice, a relatively new concept of care for cancer patients who do not respond to treatment, provides special care for the dying. It advocates the quality of survival, rather than the length of survival. Consequently, this project's emphasis is on effective symptom management and host maintenance during advanced stages of cancer. Sophisticated medication, comforting techniques, and home or home-like environments with specialized care are employed and evaluated.

The Cancer Control Program currently provides support to the home-care portion of the first implementation of a hospice for cancer patients in the United States. This hospice has served the greater New Haven, Connecticut community since March 1974. Recently, the existing home-service component has been extended from a 35 to a 90 family capacity. The program has been successful in providing multidisciplinary support, including: 1) ease of physical discomfort through symptom control; 2) ease of psychological discomfort through appropriate activities and companionship; 3) assistance in maintaining the emotional equilibrium of the patient and family through social, medical, and spiritual counseling; and 4) aid in creating an environment that openly accepts and copes with the varied needs of patients and their families on a 24-hour basis, without acute overreactions. By the end of June 1977, this hospice provided "full service" in its home-service program to over 360 patient-family units through a well-trained 250-person

staff, comprised mainly of volunteers. Full service includes physician consultation, regular nurse visits with full-time emergency availability, social work consultation to patients, family case work, assistance in patient needs (e.g., shopping, transportation, etc.) by volunteers, and bereavement follow-up. The home-care program supports 130 patient-family units per year.

The planned in-patient facility is projected to support approximately 900 patients per year with a 44-bed capacity. It is expected to benefit an estimated 3,600 persons directly, with an indirect benefit to 10,000 persons through the extended use of methods proven in the present hospice.

The hospice has proven viable in filling gaps in health care services created by current limitations of hospitals and nursing homes. Of the patients who died among the 360 patients admitted during the three-year performance, 74% died in their own home. This is a far greater percentage than the most recent National Center for Health Statistics figures, which indicate that only 2% Americans die in their own home, 92% in hospitals, and 6% in nursing homes.

The Cancer Control Program plans a continuing field test of the hospice concept. Three contracts will be funded to determine the impact of hospices in various areas of the United States. Like the New Haven Hospice, these additional hospices will be modeled after the St. Christopher Hospice in London, England and the St. Luke's Hospice in Sheffield, England. These two British hospices are tailored to meet the specific needs of cancer patients and are only two of the 31 hospices now serving persons terminally ill from various diseases throughout the United Kingdom. DCCR's field tests will ascertain the service configurations and approaches that are most compatible to the United States and will provide a further measure of the beneficial impact on cancer patients and families.

Integrated Rehabilitation Services

Ten projects in Demonstration of Cancer Rehabilitation Facilities and/or Departments, have been funded to develop model rehabilitation programs covering the entire course of a cancer patient's illness. These rehabilitation models are to be demonstrated in major medical center settings with a view toward developing rehabilitation protocols that can be easily disseminated to, and used by, community hospitals. These are three-year projects. Of the ten demonstration projects funded during FY '77 six will end in June '77 and four will continue into FY '78.

These demonstration projects deal with the institutional as well as the medical aspects of providing and organizing rehabilitation interventions in major medical centers. A current assessment of these projects reveals that there are common components in each rehabilitation project. Namely, 1) a population of treated cancer patients, 2) pools of referring physicians, 3) a team that develops and provides the rehabilitation resources and services to the cancer patient, and 4) a coordinating or liaison unit. The success or effectiveness of a given rehabilitation program can now be measured by the

juxtaposition and functioning of each of these components. Each project is providing a description of its overall systems with evaluation of impact on institutions and patients vis-a-vis rehabilitation.

It is estimated that the operational projects have instructed over 8,000 professionals on how to apply various rehabilitation services through over 600 lectures, presentations, and conferences. Representatives from well over 100 institutions, from most States in the United States, have visited these projects for study periods of up to three weeks in duration to seek advice on how to implement and/or teach the rehabilitation practices being demonstrated.

During the performance period an estimated 17,000 patients were involved in these demonstrations. They received the benefits of physical and psychological restoration, and social vocational support.

Integrated Rehabilitation in Multiple Hospitals

Four projects are demonstrations of rehabilitation and continuing care employing a collaborative institution approach. These are the Integrated Cancer Rehabilitation Services. They have developed referral and cooperative agreements, trained integrated cancer rehabilitation teams, developed descriptions of team and management functions, developed standards and protocols for services, and instituted reporting systems. Over 8,000 patients have been referred, screened and placed in the rehabilitation process. Involvement of the community hospitals and physicians has been successful, with a 33 percent increase in physician referral.

The Integrated Cancer Rehabilitation Services projects are an adjunct to the Facilities and/or Departments demonstration projects. In the former, one institution coordinates one or more hospitals and clinics for improved rehabilitation. These projects have encountered the same difficulties as the single institution projects in quantifying their progress.

At-Home Rehabilitation Services

In order to provide a full spectrum of rehabilitation resources to cancer patients on an at-home basis, three contracts are developing, field testing, and evaluating approaches to home care rehabilitation support. These projects in Development and Implementation of At-Home Rehabilitation Programs, are: 1) identifying physical, psychological, vocational, nutritional, and continuing care needs of the discharged oncology patient; 2) educating and coordinating rehabilitation teams, community resources, and discharged patients and families toward rehabilitation; and, 3) evaluating the design and its impact in terms of physical restoration, psychosocial adjustments, vocational re-entry, and program efficiency.

Benefits to approximately 500 patients have been achieved by treating the patient with coordinated care services offered by the community and at-home rehabilitation teams. These benefits include interventions in

psychosocial adjustment, reduction of pain and other discomforts, self-care, food intake problems, speech problems, etc.

Early Intervention for Psychosocial Problems

Sophisticated diagnosis and treatment procedures, the physical effects of cancer and side effects of treatments, all introduce psychological and social stress that are unique to cancer rehabilitation. Previous approaches have simply employed clinical observations in a programmatic approach to helping cancer patients. To date, these endeavors have not employed controlled designs for studying the benefits of early identification and early intervention in the psychosocial problems of cancer patients. Four projects in Demonstration of Benefits of Early Identification of Psychosocial Problems and Early Intervention Toward Rehabilitation of Cancer Patients, provide for a systematic study to identify problems and interventions and to evaluate the results. Patient groups, characterized by high and low risk psychological trauma, will be given certain intervention therapies designed to relieve the psychological stress and better utilize rehabilitation.

Each of the four projects have selected specific patient types, i.e. disease sites and/or age groups. They cover head and neck, breast, lung, bone, prostate, bladder, renal, cervical, uterine, ovarian, lymphoma, and leukemia. Two projects address problems of the older age group and of pediatrics, respectively.

Two problem areas have become evident in these projects. They are: 1) selecting appropriate tools to measure the psychological variables particular to cancer patients and 2) recruiting an adequate sample size.

Psychological Aspects of Breast Cancer

Currently five contracts are funded by the Division of Cancer Control and Rehabilitation to demonstrate the Psychological Aspects of Breast Cancer. These five projects are charged with: 1) identifying the significant psychological, social and economic factors which affect the breast cancer patient and her family, and 2) implementing interventions to resolve psychological problems resulting from breast cancer. As a result of a recent merit review of these five projects, a modification in the workscope was recommended and is being implemented. The modification calls for a more significant, rigorous methodology and more uniformity among the five contractors in their study of this problem. The projects have been restructured into a collaborative endeavor which not only promises a more significant defense data base, but also a more cost effective approach.

Reemployment of Work-Able Cancer Patients

Five projects are conducting a survey of employer attitudes toward the employment of work-able cancer patients to determine if there is job discrimination against cancer patients. If such discrimination is found to

exist, action programs are to be developed to modify employer attitudes and improve employment opportunities for cancer patients.

These projects are the Modification of Employer's Attitudes Toward The Employment of Work-Able Cancer Patients. They are three-year projects and are in their third year of performance. All contractors have completed Phase I and have submitted Phase I reports. NCI must now aggregate the data to ensure a uniform report. Further work by these contractors is not anticipated.

Training Program for Maxillofacial Prosthodontists and Dental Technicians

The objectives of the program are two-fold: 1) to provide for the advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of the head and neck, and 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.

Four contracts were awarded in June 1974. Performance periods of these contracts were to be through June 1976. Three contractors were extended for one year to train additional personnel at a reduced funding level.

A contract awarded to Eye and Ear Hospital, Pittsburgh, Pennsylvania, on 6/27/75 has been extended for an additional year.

A total of 19 maxillofacial prosthodontists and 26 maxillofacial dental technicians have been trained through this program. These highly skilled professionals are also active in other Cancer Control programs such as the Prototype Network Demonstration Program for Head and Neck Cancer, Demonstration of Cancer Rehabilitation Facilities and in the care of patients in various institutions.

As a result of this program cancer patients have benefited from restoration and reconstruction of oral facial structures, protective shielding devices and dental services when undergoing radiation treatments, and from information disseminated to their families, lay public and professionals.

In the training process, six basic problems have been encountered and mostly solved. These are: 1) developing the means and programs to train prosthodontists in the highly specialized skills necessary for reconstruction prosthesis; 2) developing the means and programs to train dental technicians in the fabrication of prosthetic devices to appliances for rehabilitation of patients; 3) selecting suitable trainees so that cancer programs can be supported in various areas of the country; 4) developing and implementing suitable comprehensive multidisciplinary course curricula to coordinate both the prosthodontists' and dental technicians' training; 5) developing

out-reach methods to encourage the patient's physician and/or surgeon to consider prosthetics when applicable; and 6) disseminating information to the lay public.

Plans

Emphasis in this coming year will be placed on: 1) assessment and consolidation of the information that has been generated by the funded projects of the Rehabilitation Program, 2) increased emphasis on rehabilitation in community and community-based programs; and, 3) expanded rehabilitation research activities (discussed in the next section of this report). Thus, the rehabilitation and continuing care program will:

- seek to stimulate publication of papers and monographs directly related to cancer rehabilitation;
- provide for continued staff assistance to rehabilitation programs through site visits, conference participation and workshops;
- encourage and sponsor state of the art conferences on cancer rehabilitation and continuing care;
- edit publications and distribute rehabilitation protocols developed by the funded projects;
- expand the cancer control programs that are field testing and/or demonstrating approaches to at-home rehabilitation and continuing care, the hospice concept, and training of maxillofacial prosthodontists, (these will be additions to previously funded project areas, which require a broader range of geographical settings or approaches to fully demonstrate these methods and techniques),
- develop rehabilitation emphasis in the community-based cancer control programs, and
- develop rehabilitation emphasis in the comprehensive cancer centers' outreach programs.

CONTRACT SUMMARY

1. Title: Development and Utilization of Rehabilitation and/or Continuing Care Resources and Services
2. Principal Investigator: Dr. Sylvia A. Lack
765 Prospect Street
New Haven, Connecticut 06511
3. Performing Organization: Hospice, Inc.
4. Contract Number: 55053
5. Starting Date: 9/3/74
6. Expiration Date: 9/3/77
7. Objective: To identify the resources, facilities and services needed to ensure improved rehabilitation and/or continuing care to discharged cancer patients. Train health care specialists and implement a program utilizing the identity resources and services in a coordinated endeavor. Evaluate the benefits of such a program.
8. Proposed Course: The contractor will provide continued care based on the "Hospice Philosophy" to terminal cancer patients.
9. Progress: During the period covered by this report, continuing care has been provided to 328 patient/families. A full and functional interdisciplinary team, 15 now at full strength. Two physicians, 3 nurses, a social worker, a physical therapist and a consulting psychiatrist constitute the core team. Over 100 trained volunteers provide direct service to patients, on-call services and administrative staff support. Plans for a 44-bed in-patient facility are more realistic now due to a 12 million support award from the state. This program has sponsored two national symposia and is a recognized leader in the field.
10. Significance for Cancer Control Program: To demonstrate rehabilitative and continuing care methods and their benefits to cancer patients.

National Cancer Program Objective: C7 Approaches: C7.1, C7.2, C7.5
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$397,964

CONTRACT SUMMARY

1. Title: Development and Utilization of Rehabilitation and/or Continuing Care Resources and Services
2. Principal Investigator: Dr. Susan Mellette
1200 East Broad Street
Richmond, Virginia 23298
3. Performing Organization: Medical College of Virginia
Health Sciences
4. Contract Number: 65287
5. Starting Date: 11/04/75 6. Expiration Date: 6/14/77
7. Objective: To identify the resources, facilities and services needed in the outpatient clinic and at home for the rehabilitation and/or continuing care of the oncology patient. Provide for the education of health care specialists. Evaluate the benefits of definite followup care.
8. Proposed Course: The contractor will provide for continuing care by the organization of a multidisciplinary visiting health care team and volunteers.
9. Progress: In the second year, 847 patients were followed by the project. The volume of patient contacts has increased significantly from 2707 in the first year to 12,044 in the second. A chief accomplishment this year has been development of basic protocols for each team and discipline. Also completed is a computerized record system which includes ten function scales devised or modified by the project. Staff have expanded their educational role through production of patient education materials. New resources developed include Alcoholic Rehabilitation, Vocational Rehabilitation, Recreation, and Dietary coverage of project patients.
10. Significance for Cancer Control Program: To demonstrate rehabilitative and continuing care methods and their benefits to cancer patients.
National Cancer Program Objective: C7 Approaches: C7.1, C7.2, C7.5
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$203,577

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: C. William Aungst, M.D.
666 Elm Street
Buffalo, New York 14203
3. Performing Organization: Roswell Park Memorial Institute
4. Contract Number: 55299
5. Starting Date: 6/27/75
6. Expiration Date: 6/26/77
7. Objective: Develop model cancer patient rehabilitation program providing physical, psychological and social support covering entire course of patient's illness. Implement educational and instructional programs for each discipline and include staff of affiliated organizations in educational programs.
8. Proposed Course: The contractor will establish a coordinated educational and rehabilitation service program, whose integral aspect involves a multidisciplinary team approach, for cancer patients and their families from diagnosis through follow-up.
9. Progress: The contractor has completed the planning and organization of multidisciplinary team approach to rehabilitation. Program components and services include: (1) rehabilitation counseling, rehabilitation nursing, social work OVR counseling, occupational therapy, physical therapy, enterostomal therapy and speech therapy. A Rehabilitation Advisory Committee has been established that involves 22 physicians and surgeons from oncology departments of the Institute. Over 3200 new patients have been referred to the rehabilitation services in the period October 1975 through June 1977.

A follow-up program for program referrals to agencies such as home health services, units of the American Cancer Society (ACS), State Offices of Vocational Rehabilitation and other community agencies has been instituted. During the period from July, 1975, through March, 1976, 1034 patients have been referred to the Home Health Services and 107 patients to ACS by the Nursing component of the program. Additionally, the Hospital Department of Social Services has referred 532 patients to ACS and the Psychosocial Rehabilitation Services of the program has referred 47 patients to the State Office of Vocational Rehabilitation.
10. Significance for Cancer Control Program: To demonstrate a comprehensive rehabilitative program at a major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1, C6.2, C6.3
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$314,852

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: Dr. Paul Engstrom
7701 Burholme Avenue
Philadelphia, Pennsylvania 19111
3. Performing Organization: Fox Chase Comprehensive Cancer Center
Institute for Cancer Research
4. Contract Number: 45126
5. Starting Date: 6/15/74
6. Expiration Date: 6/14/77
7. Objective: Develop model patient rehabilitation service system providing medical, psychological and social support covering entire course of a patient's illness. Implement educational and instructional programs for each discipline and include staff of affiliated organizations in educational programs.
8. Proposed Course: The contractor will establish a coordinated educational and rehabilitation service program, whose integral aspect involves a multidisciplinary approach, for cancer patients and families from diagnosis through follow-up.
9. Progress: A rehabilitation program has been implemented using a multidisciplinary approach. An estimated total of 800 patients will have been involved in the program by June 1977. Primary organization of the program includes: (1) physical therapy, (2) occupational therapy; (3) speech therapy; (4) psychology; (5) social work; and, (6) nursing. An effective outreach education program for professionals has exceeded 150 lectures and presentations.
10. Significance for Cancer Control Program: To demonstrate comprehensive rehabilitative program at major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1, C6.2, C6.3
11. Project Officer: Dr. Mary Ann Sestili
12. FY 1977 Funds: None - FY'77 funded from '76 funds

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: Alicia E. Hastings, M.D.
2400 6th Street, N.W.
Washington, D.C. 20009
3. Performing Organization: Howard University
4. Contract Number: 55300
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/77
7. Objective: Develop model patient rehabilitation service system providing physical, psychological and social support covering entire course of a patient's illness. Implement educational and instructional programs for each discipline and include staff of affiliated organizations in educational programs.
8. Proposed Course: The contractor will establish a coordinated educational and rehabilitation service program, whose integral aspect involves a multidisciplinary approach, for cancer patients and families from diagnosis through follow-up.
9. Progress: A rehabilitation program using a multidisciplinary approach has been implemented. Over 400 patients have been involved in the program services, as of March 1977. The program has been well accepted by involved hospital departments, the Tumor Registry at another hospital, and the local American Cancer Society (ACS). The services to patients have involved: (1) physical and occupational therapies; (2) speech therapy; (3) psychosocial assistance; (4) social work; (5) vocational counseling; (6) enterostomal therapy; (7) dental care, prosthetics and orthotics; and, (8) rehabilitation nursing. Evaluation methodology further developed.
10. Significance for Cancer Control Program: To demonstrate comprehensive rehabilitative program at major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1, C6.2., C6.3
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$414,106

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments.
2. Principal Investigator: Dr. Phala A. Helm
5323 Harry Hines Boulevard
Dallas, Texas 75235
3. Performing Organization: University of Texas Health Science Center
4. Contract Number: 45133
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/77
7. Objective: The contractor shall develop a model patient rehabilitation service system that will provide the medical, psychological and social support required to return the cancer patient to a normal and productive life. The cancer rehabilitation system, to be established at a comprehensive medical care center, should cover the entire course of a patient's illness, starting from the diagnosis of cancer and continuing through treatment and all necessary followup support after discharge.
8. Proposed Course: Through the use of a multidisciplinary team approach, this program will identify the physical, psychological and social problems of patients, design a rehabilitation program that is tailored for each patient and provide intervention therapy accordingly. The program's effectiveness will be evaluated using a series of patient outcome parameters.
9. Progress: A rehabilitation program has been implemented and demonstrates a multidisciplinary team approach. Rehabilitation service areas have included: 1) psychosocial services, 2) physical and occupational therapies, 3) social services using a patient advocate approach, 4) enterostomal services, 5) nutritional services, 6) pain services, and 7) chaplain services. Both a public and a professional education program have been operative, providing lectures and papers. To date approximately 400 patients have been referred to and enrolled in the program.
10. Significance for Cancer Control Program: To demonstrate comprehensive rehabilitative program at major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1, C6.2, C6.3
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: No FY77 Funds

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: Dr. Justus Lehmann
1959 N.E. Pacific Avenue
Seattle, Washington 98105
3. Performing Organization: University of Washington
4. Contract Number: 45039
5. Starting Date: 4/1/74
6. Expiration Date: 3/31/77
7. Objective: Develop model patient rehabilitation service system providing medical, psychological and social support covering entire course of a patient's illness. Implement educational and instructional programs for each discipline and include staff of affiliated organizations in educational programs.
8. Proposed Course: The contractor will establish a coordinated educational and rehabilitation service program, whose integral aspect involves a multidisciplinary approach, for cancer patients and families from diagnosis through follow-up.
9. Progress: A rehabilitation program has been implemented in the University hospital system. Several facilities within the system, covering regions of the State, have been involved. Data on 805 patients have been reviewed for possible involvement in the rehabilitation program. Of these patients, 663 had problems which could be helped through rehabilitation interventions. Requests for automatic referral of new patients, starting in January, 1976, have been sent to involved representatives of hospitals and physicians. Original estimates of patient numbers have been met. Services include: (1) physical and occupational therapies; (2) psychiatry and psychology; (3) speech therapy; (4) social work; (5) vocational counseling; (6) rehabilitation nursing; (7) prosthetics and orthotics; (8) pain management; and (9) treatment and medical surveillance oncology team. Outreach education programs for professionals are underway. The model being developed and demonstrated is to review patients through multidisciplinary team efforts and recommend specific interventions for existing and new patients, with automatic referral for review on new patients. Final report submitted.
10. Significance for Cancer Control Program: To demonstrate comprehensive rehabilitative program at major medical setting.
National Cancer Program Objective: C6 Approaches: C6.1, C6.2, C6.3
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$249,803

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: Anne Pascasio, Ph.D.
3017 Cathedral of Learning
Fifth Avenue
Pittsburgh, Pennsylvania 15260
3. Performing Organization: University of Pittsburgh
4. Contract Number: 55298
5. Starting Date: 6/26/75
6. Expiration Date: 6/26/77
7. Objective: The contractor shall develop a model patient rehabilitation service system that will provide the medical, psychological and social support required to return the cancer patient to a normal and productive life. The cancer rehabilitation system, to be established at a comprehensive medical care center, should cover the entire course of a patient's illness, starting from the diagnosis of cancer and continuing through treatment and all necessary followup support after discharge.
8. Proposed Course: The contractor will develop a system for the coordination of rehabilitation efforts for patients with cancer in six of the University Health Center of Pittsburgh's (UHCP) facilities. The project centers around a multidisciplinary Cancer Rehabilitation Care team of which each team member serves as the coordinator for the project in one of the facilities. An evaluation methodology will verify the efficiency and effectiveness of the project in terms of program and patient outcomes.
9. Progress: The first year of this three year project focused on employment, orientation of personnel, establishment of the project in the UHCP and initiation of patient flow. The second year is devoted to coordinating rehabilitation programs in the UHCP which will assure the availability of physical, psychological, and social support necessary to restore patients with cancer to as normal and productive a life as possible. As of June 1977, approximately 250 patients have been referred to the project.
10. Significance for Cancer Control Program: To demonstrate a comprehensive rehabilitative program at a major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1,C6.2,C6.3
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$115,877

CONTRACT SUMMARY

1. Title: Demonstration of Cancer Rehabilitation Facilities and/or Departments
2. Principal Investigator: Dr. Guy F. Robbins
444 East 68th Street
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied Diseases
4. Contract Number: 55223
5. Starting Date: 12/1/73
6. Expiration Date: 4/5/77
7. Objective: Develop model patient rehabilitation service system providing medical, psychological and social support covering entire course of a patient's illness. Implement educational and instructional programs for each discipline and include staff of affiliated organizations in educational programs.
8. Proposed Course: The contractor will establish a coordinated educational and rehabilitation service program, whose integral aspect involves a multidisciplinary approach, for cancer patients and families from diagnosis through follow-up.
9. Progress: A rehabilitation program has been implemented that includes: (1) rehabilitation services in physical therapy, which has involved 775 breast and 932 other cancer patients; (2) nutrition program in oral and tube feeding and nutrition counseling, which has involved 291 patients; (3) psychosocial program, which has involved 366 patients; (4) clinical physiology program for counteracting metabolic disturbances, which has involved 369 patients; (5) pain clinic, which has involved 960 patients; (6) head and neck dental program, which has involved 1800 patients for both treatment and rehabilitation-oriented interventions; and, (7) bladder and stoma care activity, which has involved some 200 patients. Some of these areas have automatic referral patterns. When considering the overlap of the same patient receiving assistance from multiple areas, it is estimated that over 3000 patients have been involved in the Program. In addition, social services were provided through the hospital's department. This program exhibits the extent to which strong, ongoing departments, clinics and services can be integrated in a major cancer hospital. Staff education programs were the primary method used to obtain referrals and the multidisciplinary team approach was exercised primarily at the program component level. Outreach, professional and public education has been extensive, with over 400 visits by professionals from over 40 institutions in 26 states. Professional lectures and conferences have exceeded 100 in the project life.

The project has been extended three additional months at no additional cost to the Government for the purpose of evaluation.

10. Significance for Cancer Control Program: To demonstrate a comprehensive rehabilitative program at a major medical setting.

National Cancer Program Objective: C6 Approaches: C6.1, C6.2, C6.3

11. Project Officer: Lawrence D. Burke

12. FY 1977 Funds: \$453,480

CONTRACT SUMMARY

1. Title: Demonstration of a Cancer Rehabilitation Facility and/or Department
2. Principal Investigator: John E. Stanwood, M.D.
2801 North Gantenbein Avenue
Portland, Oregon 97227
3. Performing Organization: Emanuel Hospital
4. Contract Number: 55182
5. Starting Date: 6/30/75
6. Expiration Date: 10/28/78
7. Objective: The contractor shall develop a model patient rehabilitation service system that will provide the medical, psychological and social support required to return the cancer patient to a normal and productive life. The cancer rehabilitation system, to be established at a comprehensive medical care center, should cover the entire course of a patient's illness, starting from the diagnosis of cancer and continuing through treatment and all necessary followup support after discharge.
8. Proposed Course: The contractor will develop a comprehensive rehabilitation program for cancer patients through utilization of the expertise of a multidisciplinary health team to design the patient's rehabilitation program. Recommended services are provided accordingly and are monitored by the program coordinator. Evaluation plans include both program outcomes and patient outcomes.
9. Progress: A coordinated, comprehensive rehabilitation program is in operation. As of June 1977, a total of 497 patients were referred by primary care physicians and enrolled in the program. Through the Cancer Care Plans which have been prepared, a patient's pre-treatment, treatment and post-treatment problems are addressed and the recommended intervention is identified.
10. Significance for Cancer Control Program: To demonstrate a comprehensive rehabilitation facility at a major medical setting.
National Cancer Plan Objective: C6 Approaches: C6.1,C6.2,C6.3
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$320,823

CONTRACT SUMMARY

1. Title: Integrated Cancer Rehabilitation Services
2. Co-Principal Investigators: Dr. Joseph Concannon
Mr. Folger Hunt
11460 Guys Run Road
Pittsburgh, Pennsylvania 15238
3. Performing Organization: Harmarville Rehabilitation Center
4. Contract Number: 65183
5. Starting Date: 2/27/76
6. Expiration Date: 2/26/78
7. Objective: The contractor shall develop a model patient rehabilitation service system that will provide the medical, psychological and social support required to return the cancer patient to a normal and productive life. The cancer rehabilitation system, to be established at a comprehensive medical care center, should cover the entire course of a patient's illness, starting from the diagnosis of cancer and continuing through treatment and all necessary followup support after discharge.
8. Proposed Course: The contract will demonstrate the effectiveness of a comprehensive rehabilitation program for cancer patients by integrating the services and facilities of eight participating hospitals and community organizations. To evaluate the program's effectiveness, patients are randomly assigned to a control or experimental group. The latter will receive services recommended by the rehabilitation team; the former will receive those services recommended by the patient's physician alone. An assessment of patient status will be conducted at assigned time intervals to determine program effectiveness.
9. Progress: To date, June 1977, the project has accomplished the following: agreement of physicians at all hospitals to participate by referring patients to the program; employment of all personnel; development of operational procedures and plans (Implementation Plan, Randomization Procedure, Patient Assessment Records); establishment of Oncology Rehabilitation Committee, a multidisciplinary team responsible for designing patient rehabilitation plan. At present, 120 patients have been entered in the project.
10. Significance for Cancer Control Program: To field test rehabilitative methods at multiple sites.
National Cancer Program Objective: C5 Approaches: 5.1, 5.2
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$187,175

CONTRACT SUMMARY

1. Title: Development and Implementation of an At-Home Rehabilitation Program
2. Principal Investigator: Dr. Alvin Freehafer
11000 Cedar Avenue
Cleveland, Ohio 44106
3. Performing Organization: The Cancer Center, Inc.
4. Contract Number: 65302
5. Starting Date: 2/20/76
6. Expiration Date: 2/29/78
7. Objective: To design a program with the full spectrum of rehabilitation resources available to the cancer patient on an at-home basis to ensure continued rehabilitation progress and their consolidation of hospital-acquired gains. The tasks to be achieved are: 1) to identify the rehabilitation needs of discharged patients, 2) coordinate at-home rehabilitation teams and community resources, 3) provide for the education of team members, and 4) design a methodology for evaluating the program.
8. Proposed Course: The contractor will develop a home care program using the expertise of a multidisciplinary health team to support the patient and family by providing a planned program for the continued care of the patient at home.
9. Progress: Since the contract's inception considerable progress has been accomplished, attributable mainly to the leadership of the project director. Recruitment for a multidisciplinary team was immediately initiated and to date all members of the team are performing their functions in compliance with the project plan. Patient referral systems have been designed and have been agreed upon between hospital personnel and rehabilitation team personnel at the five participating hospitals. The program is concentrating on adults with lung, breast and colon-rectal cancers. A pediatric population is also included. As of June 1977, 200 patients had been referred into the program.
10. Significance for Cancer Control Program: To demonstrate rehabilitative and continuing care methods and their benefit to cancer patients.

National Cancer Program Objective: C5 Approaches: 5.1
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$270,919

CONTRACT SUMMARY

1. Title: The Development and Implementation of At-Home Rehabilitation Programs
2. Principal Investigator: Dr. Thomas K. L. Lau
2230 Liliha Street
Honolulu, Hawaii 96817
3. Performing Organization: St. Francis Hospital
4. Contract Number: 55201
5. Starting Date: 6/28/75
6. Expiration Date: 6/28/78
7. Objective: To design and implement a program with the full spectrum of rehabilitation resources available to the cancer patient on an at-home basis to ensure continued rehabilitation progress and the consolidation of hospital-acquired gains. The tasks to be achieved are: (1) to identify the rehabilitation needs of discharged patients, (2) coordinate at-home rehabilitation teams and community resources, (3) provide for the education of team members, and (4) design a methodology for evaluating the program.
8. Proposed Course: The contractor will develop a home care program using the expertise of a multidisciplinary health team to support the patient and family by providing a planned program for the continued rehabilitation of the patient on an at-home basis.
9. Progress: The Cancer Rehabilitation Service (CARES) At-Home Rehabilitation Program has provided the services of dental hygienists, dietitians, enterostomal therapists, medical secretaries, occupational therapists, social workers, public health nurses, recreational therapists, speech therapists and home care nurses to 144 cancer patients referred to home care.

CARES At-Home has also presented community orientation programs for members of the staffs of the State Department of Social Services and Housing, the Department of Vocational Rehabilitation and the Catholic Social Services. The program addressed the cancer program at St. Francis and the multidisciplinary approach used by CARES At-Home in-patient rehabilitation.

The CARES At-Home program works in close cooperation with St. Francis Hospital.

10. Significance for Cancer Control Program: To demonstrate rehabilitative and continuing care methods and their benefit to cancer patients, when provided to the patient on an at-home basis.

National Cancer Program Objective: C7 Approaches: C7.1, C7.2, C7.5

11. Project Officer: Lawrence D. Burke

12. FY 1977 Funds: \$112,188

CONTRACT SUMMARY

1. Title: Development and Implementation of an At-Home Rehabilitation Program
2. Principal Investigator: Dr. James Swenson
University of Utah
Salt Lake City, Utah 84112
3. Performing Organization: University of Utah
4. Contract Number: 65301
5. Starting Date: 9/4/75
6. Expiration Date: 9/4/78
7. Objective: To design a program with the full spectrum of rehabilitation resources available to the cancer patient on an at-home basis to ensure continued rehabilitation progress and their consolidation of hospital-acquired gains. The tasks to be achieved are: 1) to identify the rehabilitation needs of discharged patients, 2) coordinate at-home rehabilitation teams and community resources, 3) provide for the education of team members, and 4) design a methodology for evaluating the program.
8. Proposed Course: The contractor will develop a home care program using the expertise of a multidisciplinary health team to support the patient and family, by providing a planned program for the continued care of the patient at home.
9. Progress: Since the contract's inception, progress has occurred in the following areas: personnel have been recruited and the project has been implemented in the University hospital. There were 170 patients entered into the Cancer Rehabilitation project from September 1975, through September 1976.
10. Significance for Cancer Control Program: To demonstrate rehabilitative and continuing care methods and their benefit to cancer patients.

National Cancer Program Objective: C5 Approach: 5.1
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$195,403

CONTRACT SUMMARY

1. Title: Demonstration of Benefits of Early Identification of Psychosocial Problems and Early Intervention Toward Rehabilitation of Patients
2. Principal Investigator: Dr. John Dawson
151 East Bannock Street
Boise, Idaho 83702
3. Performing Organization: Mountain States Tumor Institute
4. Contract Number: 55189
5. Starting Date: 3/3/75
6. Phase-Out Date: 7/30/77
7. Objective: To develop a program to demonstrate the benefits of early identification of psychosocial problems and early intervention toward rehabilitation of cancer patients.
8. Proposed Course: The contractor will develop early identification criteria through utilization of standardized psychosocial tests and interviews. The program will be evaluated to determine the reliability and validity of the criteria and effectiveness of the intervention method.
9. Progress: This project has selected experimental and control groups for a controlled study of the benefits of identification and intervention with psychosocial problems of cancer patients. Progress has been made in staffing and training and in treatment planning which includes assessment during intervention and annual follow-up testing. The State Trait Anxiety Inventory test was given to 100 patients with breast, hematologic/lymph, head and neck, urogenital and other cancers. The Cancer Assessment Inventory test and the Varnofsky Patient Performance Rating Scale were also given to 100 patients. These tests provided substantial results especially in the area of trend analysis. Further tests, including the Profile of Adaptation for Living and the Personal Adjustment for Role Skill Scale are planned in the future. This program experienced difficulty in acquiring an adequate sample size. A merit review determined that it should be phased out but asked them to submit a final report.
10. Significance for Cancer Control Program: Demonstrate benefits of comprehensive rehabilitation program.

National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$116,784

CONTRACT SUMMARY

1. Title: Demonstration of Benefits of Early Identification of Psychosocial Problems and Early Intervention Toward Rehabilitation of Patients
2. Principal Investigator: Dr. Leonard Diller
55 First Avenue
New York, New York 10016
3. Performing Organization: New York University Medical Center
4. Contract Number: 55188
5. Starting Date: 3/24/75
6. Expiration Date: 3/23/78
7. Objective: To develop criteria for the early identification of cancer patients who are likely to have psychosocial problems and to develop psychosocial intervention methodologies toward the resolution of those problems enabling the patient to better participate in a rehabilitation program.
8. Proposed Course: The project has two phases - Phase I, Retrospective Followup Study which will provide the data base upon which criteria for the early identification of these problems may be developed. In Phase II, Psychosocial Intervention Program, the data collected in Phase I will be used to formulate the Intervention Program to ameliorate the actual problems that cancer patients experience. Phase II will also involve evaluation of the Intervention Program.
9. Progress: Staff training, an interview manual, pilot interviews and retrospect studies of 135 patients have been completed in Phase I of the project. In addition, methods of selecting subjects have been defined for disease sites and prognosis of restorative, supportive, or palliative care. The program is currently concentrating on adults with lung, breast, bone and soft tissue cancers. The retrospective study performed under this program use data for 135 patients and collected 300 references to define criteria for those at risk for psychosocial problems. Over 119 different problems were identified in this study. Phase II is presently in operation.
10. Significance for Cancer Control Program: Demonstrate benefits of comprehensive rehabilitation program.
National Cancer Program Objective: C5 Approaches: 5.1,5.2
11. Project Officer: Mary Ann Sestili, Ph.D.
12. FY 1977 Funds: \$288,461

CONTRACT SUMMARY

1. Title: Demonstration of Benefits of Early Identification of Psycho-social Problems and Early Intervention Toward Rehabilitation of Patients
2. Principal Investigator: Dr. Charles J. Krause
Iowa City, Iowa 52242
3. Performing Organization: University of Iowa
4. Contract Number: 55061
5. Starting Date: 3/1/75
6. Phase-Out Date: 7/30/77
7. Objective: To develop a program to demonstrate the benefits of early identification of psychosocial problems and early intervention toward rehabilitation of cancer patients.
8. Proposed Course: The contractor will develop early identification criteria through utilization of standardized psychosocial tests and interviews. The program will be evaluated to determine the reliability and validity of the criteria and effectiveness of the intervention method.
9. Progress: Progress made in this project has included publication of papers on "Measurement of Life Satisfaction," and "Self-Rating Depression Inventory." Questionnaires for use in longitudinal analysis of emotional status have been developed and pretested for use with older (50-75) years, urological and head and neck cancer patients. A randomized control group of 400 patients has been selected for the program, initial interview planning has been completed and participating staff have been trained. This project experienced problems in acquiring an adequate sample. A merit review determined that it be phased out.
10. Significance for Cancer Control Program: Demonstrate benefits of comprehensive rehabilitation program.
National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$179,626

CONTRACT SUMMARY

1. Title: Demonstration of Benefits of Early Identification of Psychosocial Problems and Early Intervention Toward Rehabilitation of Patients
2. Principal Investigator: Dr. Theodore L. Phillips
San Francisco, California 94143
3. Performing Organization: University of California,
San Francisco
4. Contract Number: 55190
5. Starting Date: 5/1/75
6. Phase-Out Date: 7/30/77
7. Objective: To develop a program to demonstrate the benefits of early identification of psychosocial problems and early intervention toward rehabilitation of cancer patients.
8. Proposed Course: The contractor will develop early identification criteria through utilization of standardized psychosocial tests and interviews. The program will be evaluated to determine the reliability and validity of the criteria and effectiveness of the intervention method.
9. Progress: The project has made progress in the identification of health care teams and psychosocial teams to provide medical and psychosocial care and to organize research projects to study the benefits of early identification of, and intervention with, psychosocial problems of cancer patients. Formal procedures have been developed for case funding. These include new patient contact by social workers, interviews by psychologists, and team conferences. The primary concentration of the project, to date, has been in the areas of pediatric and head and neck cancers. Patients have been tested using NIMH test battery and psychotherapy change measures. This project experienced difficulty acquiring an adequate sample. A merit review determined that it be phased out.
10. Significance for Cancer Control Program: Demonstrate benefits of comprehensive rehabilitation program.
National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$25,500

CONTRACT SUMMARY

1. Title: Psychological Aspects of Breast Cancer
2. Principal Investigator: Dr. Joan Bloom
333 Ravenswood Avenue
Menlo Park, California 94205
3. Performing Organization: Stanford Research Institute
4. Contract Number: 55313
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/78
7. Objective: The two major objectives of this procurement were: (1) to identify the most significant aspects of the breast cancer patient and her family and (2) to design and implement a demonstration program of supportive services which would address these critical psychological issues in an effort to provide the most comprehensive type of cancer control.
8. Proposed Course: Each contractor was asked to perform a thorough literature search of all published materials relevant to the psychological aspects of breast cancer. They were also required to hold several workshops wherein the information could be gathered from experts to help develop guidelines for psychological intervention protocols. The proposed psychological interventions were then to be pretested to measure their outcome in order to determine the effectiveness of the intervention model.
9. Progress: The projects are at the end of their second year of operation and have recently been merit reviewed which resulted in a number of recommendations which are currently being incorporated in the writing of a revised work statement. To date, all five contractors have completed individual literature searches which culminated in a collaborative endeavor and the delivery of a 1,121 citation "Annotated Bibliography of the Psychological Aspects of Breast Cancer." A decision is pending to determine the usefulness of this reference and then how to most effectively transfer this knowledge to the professional community.

Four coordination meetings have been held with the contractors and each project has submitted various progress and planning reports on schedule. There is however a deviation from the proposed course and recommendations for changes in the contract which will result in 1) concentrating on coordinating the efforts of all five projects, 2) establishing a more extensive and statistically reliable data base which describes the psychological characteristics of breast cancer patients, and 3) determining the extent and manner in which the psychological profile of breast cancer patients is different from comparison groups which might dictate the implementation of psychosocial intervention programs.

10. Significance to Cancer Control: There is a demand for attention to be directed to the quality of life of the large number of breast cancer patients treated each year and to ascertain to what degree the diagnosis and treatment of breast cancer affects the woman's emotional equilibrium and level of functioning. There has not, to date, been any substantive research to describe the specific characteristics of this population or to measure the need for specific types of psychosocial rehabilitation services required to facilitate these patients' adaptation and continuation of a satisfactory life style.

Appropriate execution of this procurement will fulfill the mandate given by Congress to the National Cancer Institute and the Division of Cancer Control and Rehabilitation to reduce cancer morbidity.

National Cancer Program Objectives: C3, C5, C6 Approaches: C3.1,
C3.2, C5.1, C5.2
C6.1

11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: to be negotiated

CONTRACT SUMMARY

1. Title: Psychological Aspects of Breast Cancer
2. Principal Investigator: Dr. Allen Enelow
50 Francisco Street, Suite 200
San Francisco, California, 94133
3. Performing Organization: West Coast Cancer Foundation
4. Contract Number: 55314
5. Starting Date: 6/26/75
6. Expiration Date: 6/25/78
7. Objective: The two major objectives of this procurement were: (1) to identify the most significant aspects of the breast cancer patient and her family and (2) to design and implement a demonstration program of supportive services which would address these critical psychological issues in an effort to provide the most comprehensive type of cancer control.
8. Proposed Course: Each contractor was asked to perform a thorough literature search of all published materials relevant to the psychological aspects of breast cancer. They were also required to hold several workshops wherein the information could be gathered from experts to help develop guidelines for psychological intervention protocols. The proposed psychological interventions were then to be pretested to measure their outcome in order to determine the effectiveness of the intervention model.
9. Progress: The projects are at the end of their second year of operation and have recently been merit reviewed which resulted in a number of recommendations which are currently being incorporated in the writing of a revised work statement. To date, all five contractors have completed individual literature searches which culminated in a collaborative endeavor and the delivery of a 1,121 citation "Annotated Bibliography of the Psychological Aspects of Breast Cancer." A decision is pending to determine the usefulness of this reference and then how to most effectively transfer this knowledge to the professional community.

Four coordination meetings have been held with the contractors and each project has submitted various progress and planning reports on schedule. There is however a deviation from the proposed course and recommendations for changes in the contract which will result in 1) concentrating on coordinating the efforts of all five projects, 2) establishing a more extensive and statistically reliable data base which describes the psychological characteristics of breast cancer patients, and 3) determining the extent and manner in which the psychological profile of breast cancer patients is different from comparison groups which might dictate the implementation of psychosocial intervention programs.

10. Significance to Cancer Control: There is a demand for attention to be directed to the quality of life of the large number of breast cancer patients treated each year and to ascertain to what degree the diagnosis and treatment of breast cancer affects the woman's emotional equilibrium and level of functioning. There has not, to date, been any substantive research to describe the specific characteristics of this population or to measure the need for specific types of psychosocial rehabilitation services required to facilitate these patients' adaptation and continuation of a satisfactory life style.

Appropriate execution of this procurement will fulfill the mandate given by Congress to the National Cancer Institute and the Division of Cancer Control and Rehabilitation to reduce cancer morbidity.

National Cancer Program Objectives: C3, C5, C6 Approaches: C3.1,
C3.2, C5.1, C5.2
C6.1

11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: to be negotiated

CONTRACT SUMMARY

1. Title: Psychological Aspects of Breast Cancer
2. Principal Investigator: Dr. S. Fotopoulos
425 Volker Boulevard
Kansas City, Missouri 64110
3. Performing Organization: Midwest Research Institute
4. Contract Number: 55312
5. Starting Date: 6/28/75
6. Expiration Date: 6/27/78
7. Objective: The two major objectives of this procurement were: (1) to identify the most significant aspects of the breast cancer patient and her family and (2) to design and implement a demonstration program of supportive services which would address these critical psychological issues in an effort to provide the most comprehensive type of cancer control.
8. Proposed Course: Each contractor was asked to perform a thorough literature search of all published materials relevant to the psychological aspects of breast cancer. They were also required to hold several workshops wherein the information could be gathered from experts to help develop guidelines for psychological intervention protocols. The proposed psychological interventions were then to be pretested to measure their outcome in order to determine the effectiveness of the intervention model.
9. Progress: The projects are at the end of their second year of operation and have recently been merit reviewed which resulted in a number of recommendations which are currently being incorporated in the writing of a revised work statement. To date, all five contractors have completed individual literature searches which culminated in a collaborative endeavor and the delivery of a 1,121 citation "Annotated Bibliography of the Psychological Aspects of Breast Cancer." A decision is pending to determine the usefulness of this reference and then how to most effectively transfer this knowledge to the professional community.

Four coordination meetings have been held with the contractors and each project has submitted various progress and planning reports on schedule. There is however a deviation from the proposed course and recommendations for changes in the contract which will result in 1) concentrating on coordinating the efforts of all five projects, 2) establishing a more extensive and statistically reliable data base which describes the psychological characteristics of breast cancer patients, and 3) determining the extent and manner in which the psychological profile of breast cancer patients is different from comparison groups which might dictate the implementation of psychosocial intervention programs.

10. Significance to Cancer Control: There is a demand for attention to be directed to the quality of life of the large number of breast cancer patients treated each year and to ascertain to what degree the diagnosis and treatment of breast cancer affects the woman's emotional equilibrium and level of functioning. There has not, to date, been any substantive research to describe the specific characteristics of this population or to measure the need for specific types of psychosocial rehabilitation services required to facilitate these patients' adaptation and continuation of a satisfactory life style.

Appropriate execution of this procurement will fulfill the mandate given by Congress to the National Cancer Institute and the Division of Cancer Control and Rehabilitation to reduce cancer morbidity.

National Cancer Program Objectives: C3, C5, C6 Approaches: C3.1,
C3.2, C5.1, C5.2
C6.1

11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: to be negotiated

CONTRACT SUMMARY

1. Title: Psychological Aspects of Breast Cancer
2. Principal Investigator: Dr. Christopher C. Gates
721 Huntington Avenue
Boston, Massachusetts 02115
3. Performing Organization: Peter Bent Brigham Hospital
4. Contract Number: 65311
5. Starting Date: 12/19/75
6. Expiration Date: 12/18/77
7. Objective: The two major objectives of this procurement were: (1) to identify the most significant aspects of the breast cancer patient and her family and (2) to design and implement a demonstration program of supportive services which would address these critical psychological issues in an effort to provide the most comprehensive type of cancer control.
8. Proposed Course: Each contractor was asked to perform a thorough literature search of all published materials relevant to the psychological aspects of breast cancer. They were also required to hold several workshops wherein the information could be gathered from experts to help develop guidelines for psychological intervention protocols. The proposed psychological interventions were then to be pretested to measure their outcome in order to determine the effectiveness of the intervention model.
9. Progress: The projects are at the end of their second year of operation and have recently been merit reviewed which resulted in a number of recommendations which are currently being incorporated in the writing of a revised work statement. To date, all five contractors have completed individual literature searches which culminated in a collaborative endeavor and the delivery of a 1,121 citation "Annotated Bibliography of the Psychological Aspects of Breast Cancer." A decision is pending to determine the usefulness of this reference and then how to most effectively transfer this knowledge to the professional community.

Four coordination meetings have been held with the contractors and each project has submitted various progress and planning reports on schedule. There is however a deviation from the proposed course and recommendations for changes in the contract which will result in 1) concentrating on coordinating the efforts of all five projects, 2) establishing a more extensive and statistically reliable data base which describes the psychological characteristics of breast cancer patients, and 3) determining the extent and manner in which the psychological profile of breast cancer patients is different from comparison groups which might dictate the implementation of psychosocial intervention programs.

10. Significance to Cancer Control: There is a demand for attention to be directed to the quality of life of the large number of breast cancer patients treated each year and to ascertain to what degree the diagnosis and treatment of breast cancer affects the woman's emotional equilibrium and level of functioning. There has not, to date, been any substantive research to describe the specific characteristics of this population or to measure the need for specific types of psychosocial rehabilitation services required to facilitate these patients' adaptation and continuation of a satisfactory life style.

Appropriate execution of this procurement will fulfill the mandate given by Congress to the National Cancer Institute and the Division of Cancer Control and Rehabilitation to reduce cancer morbidity.

National Cancer Program Objectives: C3, C5, C6 Approaches: C3.1,
C3.2, C5.1, C5.2
C6.1

11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$226,685

CONTRACT SUMMARY

1. Title: Psychological Aspects of Breast Cancer
2. Principal Investigator: Dr. Jimmie Holland
111 E. 210th Street
Bronx, New York 10467
3. Performing Organization: Montefiore Hospital and Medical Center
4. Contract Number: 55214
5. Starting Date: 6/27/75
6. Expiration Date: 6/26/78
7. Objective: The two major objectives of this procurement were: (1) to identify the most significant aspects of the breast cancer patient and her family and (2) to design and implement a demonstration program of supportive services which would address these critical psychological issues in an effort to provide the most comprehensive type of cancer control.
8. Proposed Course: Each contractor was asked to perform a thorough literature search of all published materials relevant to the psychological aspects of breast cancer. They were also required to hold several workshops wherein the information could be gathered from experts to help develop guidelines for psychological intervention protocols. The proposed psychological interventions were then to be pretested to measure their outcome in order to determine the effectiveness of the intervention model.
9. Progress: The projects are at the end of their second year of operation and have recently been merit reviewed which resulted in a number of recommendations which are currently being incorporated in the writing of a revised work statement. To date, all five contractors have completed individual literature searches which culminated in a collaborative endeavor and the delivery of a 1,121 citation "Annotated Bibliography of the Psychological Aspects of Breast Cancer." A decision is pending to determine the usefulness of this reference and then how to most effectively transfer this knowledge to the professional community.

Four coordination meetings have been held with the contractors and each project has submitted various progress and planning reports on schedule. There is however a deviation from the proposed course and recommendations for changes in the contract which will result in 1) concentrating on coordinating the efforts of all five projects, 2) establishing a more extensive and statistically reliable data base which describes the psychological characteristics of breast cancer patients, and 3) determining the extent and manner in which the psychological profile of breast cancer patients is different from comparison groups which might dictate the implementation of psychosocial intervention programs.

10. Significance to Cancer Control: There is a demand for attention to be directed to the quality of life of the large number of breast cancer patients treated each year and to ascertain to what degree the diagnosis and treatment of breast cancer affects the woman's emotional equilibrium and level of functioning. There has not, to date, been any substantive research to describe the specific characteristics of this population or to measure the need for specific types of psychosocial rehabilitation services required to facilitate these patients' adaptation and continuation of a satisfactory life style.

Appropriate execution of this procurement will fulfill the mandate given by Congress to the National Cancer Institute and the Division of Cancer Control and Rehabilitation to reduce cancer morbidity.

National Cancer Program Objectives: C3, C5, C6 Approaches: C3.1,
C3.2, C5.1, C5.2
C6.1

11. Project Officer: Dr. Wendy Schain

12. FY 1977 Funds: to be negotiated

CONTRACT SUMMARY

1. Title: Modification of Employer's Attitude Toward the Employment of Work-Able Cancer Patients
2. Principal Investigator: Dr. Martin Bloom
962 Wayne Avenue
Silver Spring, Maryland 20910
3. Performing Organization: Applied Management Sciences, Inc.
4. Contract Number: 55069
5. Starting Date: 4/10/75
6. Expiration Date: 4/9/78
7. Objective: Develop and demonstrate positive program to modify employer attitudes in an effort to improve the employment and/or reemployment of cancer patients. This will be accomplished by: (1) developing a methodology to identify significant employer attitudes, (2) developing action programs to modify negative attitudes and alter employer behavior, and (3) following employer within appropriate time intervals.
8. Proposed Course: This contractor will undertake this project from an investigative empirical point of view. Information will be accumulated on attitudes of employment of work-able patients from special attitude, management and behavior change skills.
9. Progress: Activities directed toward solution of management target areas. Phase I completed. Final reports and data collected in Phase I have been submitted to NCI. Early review of Phase I data indicates Phase II and III not necessary. Further analysis and aggregation of Phase I data must be carried out by NCI.
10. Significance for Cancer Control Program: Promote positive attitudes toward rehabilitation and employment of cancer patients.

National Cancer Plan Objective: C8 Approaches: C8.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$102,305

CONTRACT SUMMARY

1. Title: Modification of Employer's Attitude Toward the Employment of Work-Able Cancer Patients
2. Principal Investigator: Dr. Melvin H. Rudov
3301 New Mexico Avenue, N.W.
Washington, D.C. 20016
3. Performing Organization: American Institute of Research
4. Contract Number: 55070
5. Starting Date: 1/8/75
6. Expiration Date: 1/7/78
7. Objective: Develop and demonstrate positive program to modify employer attitudes in an effort to improve the employment and/or reemployment of cancer patients. This will be accomplished by: (1) developing a methodology to identify significant employer attitudes, (2) developing action programs to modify negative attitudes and alter employer behavior, and (3) following employer within appropriate time intervals.
8. Proposed Course: This contractor will undertake this project from an investigative empirical point of view. Information will be accumulated on attitudes of employment of work-able patients from special attitude, management and behavior change skills.
9. Progress: Activities directed toward solution of management target areas. Phase I completed. Final reports and data collected in Phase I have been submitted to NCI. Early review of Phase I data indicates Phase II and III not necessary. Further analysis and aggregation of Phase I data must be carried out by NCI.
10. Significance for Cancer Control Program: Promote positive attitudes toward rehabilitation and employment of cancer patients.
National Cancer Plan Objective: C8 Approaches: C8.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$143,066

CONTRACT SUMMARY

1. Title: Modification of Employer's Attitude Toward the Employment of Work-Able Cancer Patients
2. Principal Investigator: Dr. Lawrence Smith
P.O. Box 866
Columbia, Maryland 21044
3. Performing Organization: Westinghouse Electric
4. Contract Number: 55094
5. Starting Date: 11/11/74
6. Expiration Date: 11/10/77
7. Objective: Develop and demonstrate positive program to modify employer attitudes in an effort to improve the employment and/or reemployment of cancer patients. This will be accomplished by: (1) developing a methodology to identify significant employer attitudes, (2) developing action programs to modify negative attitudes and alter employer behavior, and (3) following employer within appropriate time intervals.
8. Proposed Course: This contractor will undertake this project from an investigative empirical point of view. Information will be accumulated on attitudes of employment of work-able patients from special attitude, management and behavior change skills.
9. Progress: Activities directed toward solution of management target areas. Phase I completed. Final reports and data collected in Phase I have been submitted to NCI. Early review of Phase I data indicates Phase II and III not necessary. Further analysis and aggregation of Phase I data must be carried out by NCI.
10. Significance for Cancer Control Program: Promote positive attitudes toward rehabilitation and employment of cancer patients.

National Cancer Plan Objective: C8 Approaches: C8.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$41,445

CONTRACT SUMMARY

1. Title: Modification of Employer's Attitude Toward the Employment of Work-Able Cancer Patients
2. Principal Investigator: Dr. Sheldon Steinberg
5520 Wisconsin Avenue
Washington, D.C. 20014
3. Performing Organization: University Research Corporation
4. Contract Number: 55087
5. Starting Date: 12/31/74 6. Expiration Date: 6/30/77
7. Objective: Develop and demonstrate positive program to modify employer attitudes in an effort to improve the employment and/or reemployment of cancer patients. This will be accomplished by: (1) developing a methodology to identify significant employer attitudes, (2) developing action programs to modify negative attitudes and alter employer behavior, and (3) following employer within appropriate time intervals.
8. Proposed Course: This contractor will undertake this project from an investigative empirical point of view. Information will be accumulated on attitudes of employment of work-able patients from special attitude, management and behavior change skills.
9. Progress: Activities directed toward solution of management target areas. Phase I completed. Final reports and data collected in Phase I have been submitted to NCI. Early review of Phase I data indicates Phase II and III not necessary. Further analysis and aggregation of Phase I data must be carried out by NCI.
10. Significance for Cancer Control Program: Promote positive attitudes toward rehabilitation and employment of cancer patients.
- National Cancer Plan Objective: C8 Approaches: C8.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$148,978

CONTRACT SUMMARY

1. Title: Modification of Employer's Attitude Toward the Employment of Work-Able Cancer Patients
2. Principal Investigator: Dr. Thurlow Wilson
300 North Washington Street
Alexandria, Virginia 22134
3. Performing Organization: Human Resources Research Organization
4. Contract Number: 55089
5. Starting Date: 12/31/74
6. Expiration Date: 9/30/77
7. Objective: Develop and demonstrate positive program to modify employer attitudes in an effort to improve the employment and/or reemployment of cancer patients. This will be accomplished by: (1) developing a methodology to identify significant employer attitudes, (2) developing action programs to modify negative attitudes and alter employer behavior, and (3) following employer within appropriate time intervals.
8. Proposed Course: This contractor will undertake this project from an investigative empirical point of view. Information will be accumulated on attitudes of employment of work-able patients from special attitude, management and behavior change skills.
9. Progress: Activities directed toward solution of management target areas. Phase I completed. Final reports and data collected in Phase I have been submitted to NCI. Early review of Phase I data indicates Phase II and III not necessary. Further analysis and aggregation of Phase I data must be carried out by NCI.
10. Significance for Cancer Control Program: Promote positive attitudes toward rehabilitation and employment of cancer patients.

National Cancer Plan Objective: C8 Approaches: C8.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$161,827

CONTRACT SUMMARY

1. Title: Training Programs for Maxillofacial Prosthodontists and Maxillofacial Dental Technicians
2. Principal Investigator: Dr. I. Kenneth Adisman
412 First Street
New York, New York 10010
3. Performing Organization: New York University
Brookdale Dental Clinic
4. Contract Number: 45113
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/76
Extension Date: 6/26/77
7. Objective: The objective of this project is two-fold: 1) provide for the advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of head and neck; 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.
8. Proposed Course: Two Maxillofacial Prosthodontists and two dental technicians to be trained each year.
9. Progress: The contractor has successfully developed course curricula for training of residents and technicians. Four prosthodontists and four dental technicians have participated in a program of lectures, seminars, and clinical conferences which has been integrated with patient care and follow-up program designed to provide training in diagnosis of patients to suitable fabrication and maintenance of prosthetic appliances.
10. Significance for Cancer Control Program: The program is directly related to DCCR objectives. Implementation of this comprehensive Maxillofacial Training Program would reduce the nation's acute shortage and increasing demand of Maxillofacial Prosthodontists and Dental Technicians to help rehabilitate head and neck cancer patients.

National Cancer Program Objectives: C6, C7 Approaches: C6.3, C6.5, C7.1, C7.5
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: No 1977 funds
TQ: \$42,335

CONTRACT SUMMARY

1. Title: Training Programs for Maxillofacial Prosthodontists and Maxillofacial Dental Technicians
2. Principal Investigator: Joe B. Drane
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: University of Texas
System Cancer Center
4. Contract Number: 45114
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/76
Extension Date: 7/27/76
7. Objective: The objective of this project is two-fold: 1) provide for the advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of head and neck; 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.
8. Proposed Course: To train three Maxillofacial Prosthodontists and three Maxillofacial Dental Technicians each year.
9. Progress: The contractor has provided course curricula in all disciplines of dentistry related to rehabilitation and fabrication of prosthetic appliances for head and neck cancer patients. Residents are rotated through multidisciplinary centers. Three prosthodontists and six dental technicians were exposed to this training.
10. Significance for Cancer Control Program: The program is directly related to DCCR objectives. Implementation of this comprehensive Maxillofacial Training Program would reduce the nation's acute shortage and increasing demand of Maxillofacial Prosthodontists and Dental Technicians to help rehabilitate head and neck patients.

National Cancer Program Objectives: C6, C7 Approaches: C6.3, C6.5, C7.1, C7.5
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: No 1977 funds.

CONTRACT SUMMARY

1. Title: Training Programs for Maxillofacial Prosthodontists and Maxillofacial Dental Technicians
2. Principal Investigator: Dr. James B. Lepley
444 East 68th Street
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied Diseases
4. Contract Number: 45048
5. Starting Date: 1/1/73
6. Expiration Date: 6/30/76
Extension Date: 6/29/77
7. Objective: The objective of this project is two-fold: 1) provide for the advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of head and neck; 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.
8. Proposed Course: To train one maxillofacial prosthodontist and two maxillofacial dental technicians each year. Scope of work was further extended in second year to train one additional maxillofacial prosthodontist for an extension of seven months.
9. Progress: Since the project began in FY 1973, the contractor has successfully developed course curricula for training of maxillofacial prosthodontists and dental technicians. The courses, which cover topics related to the use and fabrication of prostheses and maxillofacial dental appliances for rehabilitation of patients with head and neck cancers, were provided to four resident prosthodontists and five dental technician trainees.

Courses provided under the program involved trainees in patient care, conferences, workshops and laboratories in diagnosis and treatment planning, intraoral prosthesis, extraoral prostheses, implant prosthesis and post-insertion management.
10. Significance for Cancer Control Program: The program is directly related to DCCR objectives. Implementation of this comprehensive Maxillofacial Training Program would reduce the nation's acute shortage and increasing demand of Maxillofacial Prosthodontists and Dental Technicians to help rehabilitate head and neck cancer patients.

National Cancer Program Objectives: C6, C7 Approaches: C6.3, C6.5,
C7.1, C7.5

11. Project Officer: Dr. Choksi
12. FY 1977 Funds: No 1977 Funds
TO Funds: \$34,967

CONTRACT SUMMARY

1. Title: Training Programs for Maxillofacial Prosthodontists and Maxillofacial Dental Technicians
2. Principal Investigator: Norman G. Schaaf
666 Elm Street
Buffalo, New York 14203
3. Performing Organization: New York State Dept. of Health
4. Contract Number: 45101
5. Starting Date: 6/28/74
6. Expiration Date: 6/27/76
Extension Date: 6/27/77
7. Objective: The objective of this project is two-fold: 1) provide for the advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of head and neck; 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.
8. Proposed Course: To train two Maxillofacial Prosthodontists and two Dental Technicians each year.
9. Progress: The contractor has successfully developed a three-phase program. Four prosthodontists were provided with clinical experience, didactic supplementation and research experience. In addition, five technicians were provided with lab experience and didactic supplementation.
10. Significance for Cancer Control Program: The program is directly related to DCCR objectives. Implementation of this comprehensive Maxillofacial Training Program would reduce the nation's acute shortage and increasing demand of Maxillofacial Prosthodontists and Dental Technicians to help rehabilitate head and neck cancer patients.

National Cancer Program Objectives: C6, C7 Approaches: C6.3, C6.5, C7.1, C7.5
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: No 1977 funds
TQ: \$76,969

CONTRACT SUMMARY

1. Title: Training Programs for Maxillofacial Prosthodontists and Maxillofacial Dental Technicians
2. Principal Investigator: Dr. Mohamed A. Aramany
230 Lothrop Street
Pittsburgh, Pennsylvania 15213
3. Performing Organization: Eye and Ear Hospital
4. Contract Number: 55184
5. Starting Date: 6/27/75 6. Expiration Date: 6/27/77
7. Objective: The objective of this project is two-fold: 1) provide for the use advanced training of the post-doctoral prosthodontists in the use of maxillofacial prostheses for rehabilitation of patients with cancer of head and neck; 2) to provide for the training of additional maxillofacial dental technicians in the fabrication of prosthetic devices and appliances necessary to the rehabilitation of patients with head and neck cancer.
8. Proposed Course: To train two maxillofacial prosthodontists and two maxillofacial dental technicians in two years. Request to extend the scope of work was granted. Hence, three maxillofacial prosthodontists and five dental technicians will complete their training in June 1977.
9. Progress: The curricula developed under this project include a one year training program for dental technicians which provides training in anatomy, facial prosthetics technology, ocular prosthesis technology, intraoral prosthetic technology, and maxillofacial materials.

The residency training program was expanded, with three prosthodontists scheduled to complete their training in July 1977. Two technicians have completed their training in the first year of the program. The technicians will complete training in July 1977.

10. Significance for Cancer Control Program: The program is directly related to DCCR objectives. Implementation of this comprehensive Maxillofacial Training Program would reduce the nation's acute shortage and increasing demand of Maxillofacial Prosthodontists and Dental Technicians to help rehabilitate head and neck cancer patients.

National Cancer Program Objectives: C6, C7 Approaches: C6.3, C6.5,
C7.1, C7.5

11. Project Officer: Dr. Choksi
12. FY 1977 Funds: 1978 Funds

Rehabilitation Research Grants

DCCR's rehabilitation research projects respond to the Division's limited mandate of research support for cancer rehabilitation, as opposed to its broad mandate for activities relating to cancer control. The rehabilitation research grants develop new techniques and methods of rehabilitation to a level where they can be applied through demonstration in cancer control programs or by direct application by others in the health care system.

The following grant summaries describe 35 rehabilitation research projects being funded by the rehabilitation area of the Treatment, Rehabilitation and Continuing Care Branch. These involve exploratory studies in several broad areas.

Ten grants support technical developments or interventions that deal with physical impairments and dysfunction associated with specific cancers. These include: 1) developing techniques of facial reconstruction; 2) advanced prosthetics including maxillofacial, sensory feedback and other limb prostheses, and an electronic laryngeal protheses; 3) an investigation of voice change after radiotherapy; and 4) other rehabilitation projects in oropharyngeal and laryngeal cancer. Cancer Care and Rehabilitation in a Rural Setting addresses special needs in Vermont. Two grants look at the role of nutritional support in cancer rehabilitation.

Many excellent grant supported projects address the psychosocial problems associated with cancer. Four deal with psychosocial support for children with cancer and their families. An additional eleven grants address the wide range of psychosocial issues faced in cancer treatment, rehabilitation and continuing care. These grants, taken in conjunction with previously described contract programs in psychosocial rehabilitation form the basis of DCCR's continuing strong support in this most important area of cancer care.

Cancer Control Pain Program

DCCR is currently supporting eight grants in cancer pain research, representing the major NCI funding in this area. These investigations are concerned with aspects of pain research and management directly relevant to cancer patients. Increased attention will be paid to fostering advances in control of all aspects of cancer pain in future DCCR programming.

GRANT SUMMARY

1. Title: Reconstruction of Facial Defects in Cancer Patients
2. Principal Investigator: Dr. Salvatore Esposito
Case Western Reserve University
School of Medicine
2040 Adelbert Road
Cleveland, Ohio 44106
3. Performing Organization: Case Western Reserve University
4. Grant Number: 5-R18-CA-17451-02
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/78
7. Objective: To establish a center for maxillofacial prosthetic reconstruction for patients with oral facial deformities (both external and intra-oral) that follow the treatment of cancer of the head and neck. At present, there are no such facilities available in Northeastern Ohio.
8. Proposed Course: The principal goal of this center will be: 1) to provide patient service, specifically rehabilitation of patients undergoing treatment of cancer of the head and neck; 2) to provide teaching experience for surgeons and dentists-in-training; 3) dissemination of information to physicians, dentists, health personnel and laymen of Northeast Ohio concerning maxillofacial rehabilitation for cancer patients; 4) following establishment of the center, research will be aimed at improving methods of facial rehabilitation for cancer patients using combined surgical and prosthetic techniques.
9. Progress: Equipment purchases and facilities is in full progress to provide patient service. Patient load has doubled from first year; 218 patients for 1700 visits with 322 prosthetic appliances constructed. Information is widely disseminated through lecture and television media. Research aspect of the project is being worked on at present time.
10. Significance for Cancer Control: Directly related to DCCR objectives, implementation of this program would provide facilities for patient service, and patient and lay public education.
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$93,334

GRANT SUMMARY

1. Title: Maxillofacial Prosthetic Rehabilitation for Cancer
2. Principal Investigator: Dr. Douglas A. Atwood
Dept. of Prosthetic Dentistry
Harvard School of Dental Medicine
188 Longwood Avenue
Boston, Massachusetts 02115
3. Performing Organization: Harvard School of Dental Medicine
4. Grant Number: R18-CA-18870-01
5. Starting Date: 1/1/76
6. Expiration Date: 12/31/78
7. Objective: 1) to provide much needed, effective maxillofacial prosthetic rehabilitation for cancer patients; 2) Interdisciplinary education of surgeons, dentists, maxillofacial prosthodontists, psychiatrists, social workers, etc.; 3) provide lay educators to reduce the hopelessness of cancer victims and their families; 4) research to develop new and improved methods of rehabilitation of maxillofacial patients.
8. Proposed Course: The Harvard School of Dental Medicine conducts an accredited two-year post-graduate prosthodontic training program, and they plan to provide a third year of training in maxillofacial prosthodontics at the Center.
9. Progress: A second maxillofacial prosthodontist has been recruited as patients were provided with maxillofacial prosthetic appliance services. Dissemination of information has been done through Inter-hospital Head and Neck Conferences and talks to lay public.
10. Significance for Cancer Control Program: This program is directly related to DCCR objectives. It would provide training in highly needed and specialized skill, provide rehabilitation services and disseminate information to professionals and lay public.
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$120,483

GRANT SUMMARY

1. Title: Prosthetic Rehabilitation of Oropharyngeal Cancer
2. Principal Investigator: Dr. Jerilyn A. Logemann
Northwestern University
303 East Chicago Avenue
Chicago, Illinois 60611
3. Performing Organization: Northwestern University Medical
School
4. Grant Number: 1-R18-CA-20876-01
5. Starting Date: 2/1/77
6. Expiration Date: 1/31/80
7. Objective: Evaluate the effects of intraoral prostheses on the communication and nutritional rehabilitation of patients following ablative and surgery for cancer.
8. Proposed Course: The goal is to develop an inexpensive, simply designed prosthesis which can facilitate rapid rehabilitation of a group of patients. Prosthesis will be designed for and constructed for 75 patients; 15 patients in each of the following surgical categories: 1) anterior floor of the mouth; 2) composite resection including hemi-mandibulectomy in a portion of the palate and posterior tongue; 3) composite resection including hemi-mandibulectomy in more than 60% of the tongue; 4) composite resection including hemi-mandibulectomy in less than 60% of the tongue; 5) extended supra-glottic laryngectomees including base of the tongue. Prior to construction of prosthesis, each patient's voice tract function will be evaluated including detailed studies of oral, pharyngeal and esophageal function during swallowing and oral and pharyngeal function during speech.
9. Progress: Equipment purchased and set up completed. Four patients have been selected at this early stage and prostheses prepared for them.
10. Significance for Cancer Control Program: Directly related to DCCR objectives. It would provide an evaluation to design better, simpler and more suitable prosthetic rehabilitation appliance for the patient with oropharyngeal cancer.
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$86,000

GRANT SUMMARY

1. Title: Advanced Prosthetics/Orthotics in Cancer Management
2. Principal Investigator: Dr. Hans R. Lehmeis
New York University
New York, New York
3. Performing Organization: New York University
4. Grant Number: 1-R18-CA20703-01
5. Starting Date: 11/1/76 6. Expiration Date: 10/31/79
7. Objective: To design and develop a cost-effective limb prosthesis/
orthosis system for patients who have undergone major tissue resection
due to cancer.
8. Proposed Course: To design and develop a cost-effective limb prosthesis/
orthosis system for patients who have undergone major tissue resection
due to the cancer.
9. Progress: No progress report submitted.
10. Significance for Cancer Control Program: The extreme physical voids
that result from the increasingly common high level limb amputation
(hemipelvectomy, hip disarticulation, forequarter amputation, etc.)
must be reduced by increasing the state of the art.

National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$90,000

GRANT SUMMARY

1. Title: Sensory Feedback Leg Prosthesis for Cancer Patients
2. Principal Investigator: Dr. Frank Clippinger
Duke University Medical Center
Dept. of Surgery
P.O. Box 2919
Durham, N.C. 27710
3. Performing Organization: Duke University Medical Center
4. Contract Number: 5-R18-CA-17945-02
5. Starting Date: 05/01/75
6. Expiration Date: 04/30/78
7. Objective: Amputations performed for malignancy in lower extremities are usually at a high level (high above knee or hip disarticulation) as opposed to those done for vascular or diabetic disease (low above knee or below knee). Without a knee joint to provide proprioception, the cancer amputee is at a great disadvantage in his prosthetic training.
8. Proposed Course: The approach for this study is to utilize an electrical implant for peripheral nerve stimulation. Electrodes will be placed on peripheral nerves for control of pain. Several investigators have implanted electrodes on the phrenic nerves of high quadriplegic patients to induce respiration. These human implant studies, as well as animal experiments, have shown a lack of damage to nervous tissue by pulse stimulation.

Nine cancer amputee patients have had electrodes implanted on the median nerves of upper extremities to provide sensory feedback from a prosthetic hook. These experiments have aided in developing sensory feedback techniques to aid in the treatment of cancer patients.
9. Progress: Experience with sensory feedback in upper limb amputees has been gained through median nerve stimulation from a specially designed prosthetic terminal device. In a similar manner the lower extremity amputee can be given a sensation of graded pressure in his prosthetic leg during walking. Four strain group transducers have been attached to the pylon and final modification has been done. RF transmitter and amplifiers housed in the prostheses have been developed for maximum sensory feedback. Team experience during implementation of feedback system has provided the importance and use of mapping the nerves which would receive the stimulus. This initiated the need to modify and develop electrodes and to improve the surgical technique of implementation of electrodes in static nerves.
10. Significance for Cancer Control: Directly related to Cancer Control Program. Device would provide excellent rehabilitation service to cancer amputees.

11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$23,000

GRANT SUMMARY

1. Title: Electronic Laryngeal Prosthesis
2. Principal Investigator: Dr. Byron Bailey
University of Texas Medical Branch
Dept. of Otolaryngology
Galveston, Texas 77550
3. Performing Organization: University of Texas Medical Branch
4. Contract Number: 5-R18-CA-17961-02
5. Starting Date: 05/01/75
6. Expiration Date: 04/30/78
7. Objective: Ultimately, to evaluate the usefulness of an implantable electronic laryngeal prosthesis as a voice-producing mechanism for patients who have undergone total laryngectomy.
8. Proposed Course:
 - To design and fabricate an electronic laryngeal prostheses. This prosthesis is to be implanted between the posterior pharyngeal wall and the cervical spine and will be a passive-type sound generator which derives its power from an external signal source via transdermal transduction.
 - To evaluate the tissue acceptance, durability and sound generating capability of this device on the basis of careful animal experience.
 - Ultimately, to evaluate the usefulness of an implantable electronic laryngeal prosthesis as a voice producing mechanism for patients who have undergone total laryngectomy.
9. Progress: The recent implanted transducer units covered with silastic coated with dacron felt has shown remarkable tissue compatibility. This has produced a firm seal between surrounding tissue and implanted devices, and accumulation of serous fluid is almost non-existent. Transducer durability is a major cause of system failure. Efforts are being made to provide better mechanical tolerances in this area. Better and improved surgical implementation of transducers is achieved. This is accomplished in less time with a better post-operative recovery.
10. Significance for Cancer Control: Directly related to Cancer Control Program. Device would provide excellent rehabilitation to patients with total laryngectomy.
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$ 71,000

GRANT SUMMARY

1. Title: An Investigation of Voice Change After Radiotherapy
2. Principal Investigator: Dr. Raymond H. Colton
Assistant Professor of Otolaryngology
and Communicative Sciences
SUNY, Upstate Medical Center
Weiskotten Hall, Room 89
750 East Adams Street
Syracuse, New York 13210
3. Performing Organization: SUNY, Upstate Medical Center
Syracuse, New York 13210
4. Grant Number: 5-R18-CA-17962-02
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/80
7. Objective: The purpose of this project is to document and quantify the acoustic characteristics of the voice of patients with carcinoma of the larynx as they undergo irradiation for control of the tumor.
8. Proposed Course: This project will obtain measurements of: 1) fundamental frequency; 2) phonational range; 3) pitch perturbation; 4) vocal intensity; and 5) acoustic spectra of various speech utterances prior to, during, and following radiotherapy. Approximately 100 patients with carcinoma of the vocal cord or other endolaryngeal sites will be studied longitudinally.
9. Progress: Eight weeks of recording completed on 13 patients and 13 more in progress. Due to the lack of adequate patients at the present, T1 type of patients are taken. Every week two more new patients are taken. Some of the first 13 patients are on follow-up procedure. Adequate data has been collected for computer analysis of the fundamental frequency program.
10. Significance for Cancer Control Program: To provide additional prognostic indicators concerning the degree of rehabilitative success to be achieved by documenting the acoustic changes in the voice as a result of radiotherapy.

National Cancer Program Objective: C5 Approaches: C5.3
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$62,000

Preliminary data collection indicates voice change after irradiation of the larynx for control of carcinoma. In the evidence the voice may provide for evaluating the progress of individual patients. Hopefully, this may lead to early indication of tumor recurrence as study continues.

GRANT SUMMARY

1. Title: Evaluation of Rehabilitation of Oropharyngeal Cancer
2. Principal Investigator: Dr. Jerilyn Logemann
Northwestern University
Otolaryngology and Max. Surg.
303 East Chicago Avenue
Chicago, Illinois 60611
3. Performing Organization: Northwestern University Medical Center
4. Grant Number: 5-R18-CA-18901-02
5. Starting Date: 09/01/75
6. Expiration Date: 08/31/78
7. Objective: This study is designed to evaluate the effect(s) of ablation surgery of the oral cavity and oropharynx and associated reconstructive surgery on the psychological, communicative and nutritional rehabilitation of patients with cancer of these areas.
8. Proposed Course: Forty-five patients with oral cancer requiring such surgery will be studied at four points in their protocol: 1) before initiation of treatment; 2) after radiation, if given; 3) after ablative surgery; and, 4) after the final surgical procedure to close any remaining fistula, etc.
9. Progress: Patients are currently undergoing a thorough examination protocol including detailed studies of: 1) oral, pharyngeal and esophageal function during deglutition; 2) oral and pharyngeal function during speech; 3) the source (neurologic) and extent of pain experienced, if any; 4) pattern and method of social communication; and, 5) psychosocial status. The tentative results have initiated combined speech therapy/prosthetic rehabilitation approach for each type of patient which has resulted in significant decreases in transit times in swallowing and increases in speech intelligibility.
10. Significance for Cancer Control: This progress is related to DCCR objectives. This study will provide important data on oropharyngeal rehabilitation.
11. Project Officer: Dr. Choksi
12. FY 1977 Funds: \$60,000
TQ: \$59,296

GRANT SUMMARY

1. Title: Comprehensive Rehabilitation of the Laryngectomee
2. Principal Investigator: Dr. George A. Gates
University of Texas Health
Science Center at San Antonio
7703 Floyd Curl Drive
San Antonio, Texas 78284
3. Performing Organization: University of Texas
4. Grant Number: 1-R18-CA18629-01
5. Starting Date: 9/1/75 6. Expiration Date: 8/31/78
7. Objective: The objectives of the project are threefold: To simultaneously acquire normative data about the biological, psychological, social and employment aspects of laryngectomee rehabilitation; to demonstrate that a comprehensive program of rehabilitation is more effective than current methods; and to statistically validate the indices of successful and unsuccessful rehabilitation.
8. Proposed Course: Study 100 laryngectomy patients. Patients will be assessed both pre- and post-operatively regarding biological data, speech, psychologic status, social status, and employment and financial status by a rehabilitation team. Patients will be separated into control group and experimental group. Experimental group will receive comprehensive counseling from a special team, the control group will receive only medical instruction from doctors and nurses. Evaluation to learn which group relearns speech most effectively.
9. Progress: 59 patients have been admitted to the program. Data is being collected and analyzed.
10. Significance for Cancer Control Program: Project makes clear the many factors that play a role in the successful rehabilitation of the laryngectomy patient. More effective and quicker speech relearning leads to quicker restoration of social and employment status and thus better rehabilitation.

National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$59,627

GRANT SUMMARY

1. Title: Cancer Care and Rehabilitation in a Rural Setting
2. Principal Investigator: Dr. Jerome Yates
Burgess Residence, Room 122
Burlington, Vermont 05401
3. Performing Organization: Medical Center Hospital
4. Grant Number: 5-R18-CA-17868-02
5. Starting Date: 6/1/75 6. Expiration Date: 5/31/78
7. Objective: A program is proposed which is designed to improve the treatment, rehabilitation and continuing care of patients with cancer. This proposal includes the development of a program of coordinated effort in the areas of social services, occupational therapy, physical therapy, nutritional services, and the services of nurse-practitioners with physician support and guidance from medical oncology, radiation therapy, metabolism, and surgery. These cancer control activities will be initiated in the Medical Center Hospital of Vermont and following their evaluation will be extended to support the rural medical needs in the Vermont region.
8. Proposed Course: This program will study new concepts in the care of cancer patients by the use of a multidisciplinary approach. The quality of survival and the impact of this team approach on the rehabilitation of cancer patients in both urban and rural areas will be examined.
9. Progress: A team of medical and paramedical personnel has been developed and trained to implement effective continuing care and rehabilitation of cancer patients in a rural environment. This multidisciplinary experience, transferred to patients through nurse practitioners is being assessed to determine its impact on the needs of cancer patients receiving non-curative treatment. The institution of intervention protocols and the utilization of assessment instruments are well underway. Protocols have been developed and should be published at the close of this grant.
10. Significance for Cancer Control Program: This program will serve as a demonstration model and can be used by other surrounding community hospitals for the better management of large groups of patients suffering from cancer.

National Cancer Program Objective: C6 Approaches: C6.2, C6.6
11. Project Officer: Mr. Burke
12. FY 1977 Funds: \$320,779

GRANT SUMMARY

1. Title: The Nutritional Component of Cancer Therapy
2. Principal Investigator: Dr. Thomas Nealon, Jr.
St. Vincent's Hospital and Medical
Center of New York
153 West 11th Street
New York, New York 10011
3. Performing Organization: St. Vincent's Hospital
4. Grant Number: 5-R18-CA 19632-02
5. Starting Date: 6/30/76
6. Expiration Date: 6/29/78
7. Objective: The project will evaluate the nutritional deficiency of patients with cancer undergoing aggressive chemotherapy, and to further evaluate the influence of the nutritional status on the efficacy of the cancer chemotherapy treatment. Additional goals are to identify special diets which might enhance the effect of chemotherapy and to develop new dietary techniques to enhance the efficacy of oral chemotherapy.
8. Proposed Course: Patients undergoing cancer chemotherapy will be studied. Their body weight, serum albumin, blood count, blood chemistries and plasma amino acid levels will be correlated to the nutritional intake, histologic diagnosis, status of their disease and response to chemotherapy. Particular attention will be paid to patients with liver metastases who will be maintained nutritionally with specially formulated chemical diets to see what effect this will have on their response and tolerance to chemotherapy.
9. Progress: One hundred and fifty-five cancer patients with nutritional deficiencies have been identified and are followed by the investigator's laboratory. The efficacy in nutritional support of four different diets, selected according to the clinical situation, have been studied. Advantages and disadvantages of each diet are identified.
10. Significance for Cancer Control Program: Malnutrition, weight loss and debilitation is present throughout the course of patients who develop cancer and frequently hinder attempts for maximum therapy. Improvement of the nutrition by specially designed diets which can be easily administered may reverse the nutritional deficiencies allowing the patient to tolerate more adequate therapy, especially chemotherapy. The improvement in nutrition and feeling of well-being of the patient can contribute vastly to rehabilitative efforts for the patients.

National Cancer Program Objective: C5 Approaches: C5.1
11. Project Officer: Dr. Mary Ann Sestili
12. FY 1977 Funds: \$49,214

GRANT SUMMARY

1. Title: Nutritional Support: Rehabilitation for Cancer Patients
2. Principal Investigator: Dr. C. E. Butterworth, Jr.
University of Alabama in Birmingham
School of Medicine
University Station
Birmingham, Alabama 35294
3. Performing Organization: University of Alabama in Birmingham
4. Grant Number: Ca-17928-02
5. Starting Date: 6/30/76
6. Expiration Date: 6/29/81
7. Objective: To determine the effectiveness of parenteral nutrition and other forms of nutrition therapy in improving cure rates, survival time and quality of life in cancer patients.
8. Proposed Course: The investigator will provide optimal nutrition therapy to at least forty patients per year with advanced malignant disease. This will be done by either total or partial parenteral feeding programs before, during and after definitive surgery and/or ionizing radiation or chemotherapy. Through a retrospective approach, the investigator will compare the results of therapy that includes nutritional support with conventional therapy not including nutritional support in patients matched for age, sex and primary diagnosis.
9. Progress: During the first grant year the investigator collected data on twenty-nine patients. All were evaluated as to adequacy of prior nutritional support, current nutritional status and follow-up assessment.
10. Significance for Cancer Control: Since the number of cancer patients needing nutritional support during cancer management is large and since there is considerable variety and complexity in the problems encountered, there is a continuing need to improve and standardize, on a hospital - wide basis, the system for early detection, treatment and prevention of malnutrition among cancer patients.

National Cancer Program Objectives: C5 Approaches: C5.1
11. Project Officer: Dr. Mary Ann Sestili
12. FY 1977 Funds: \$116,000

GRANT SUMMARY

1. Title: Childhood Cancer: Psychosocial Rehabilitation
2. Principal Investigator: Dr. Shirley Lansky
University of Kansas Medical Center
Mid-America Cancer Center Program
39th and Rainbow Boulevards
Kansas City, Kansas 66103
3. Performing Organization: University of Kansas Medical Center
4. Grant Number: 5-R18-CA 17806-02
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/78
7. Objective: To discover the means by which patients and their families cope with the emotional trauma of their illness, to develop a means for preventing or treating the severe emotional complications to determine the cost of such therapy and to determine which members of the health care team is best able to deal with specific problems.
8. Proposed Course: In order to define the specific emotional mechanisms used by children with cancer and their families, a series of psychological tests will be administered. The data will be collected and used to develop the means of preventing untoward complications and end results.
9. Progress: During the current year, an effort has been made to assess the effect of a malignancy on the social-emotional adjustment and well being of a child, to assess the effects on the patient's family and to develop and evaluate methods of intervention to deal with negative effects and improve the quality of life of the patient and his family. These investigators continue to collect pertinent data and to analyze, refine and report on data previously collected. A questionnaire has been developed to assess the information differential - who (patients and parents) gives information to which team member.
10. Significance for Cancer Control Program: Childhood cancer is a dramatic and emotionally disturbing disease that confronts many families in this country. Attendant with it are emotional trauma, anxieties and fears which often leave the family in a disturbed and vulnerable state. To discover the means by which patients and their families cope with these trauma and more importantly develop a means for preventing and treating the complications therefrom, is of significant interest to the National Cancer Institute. Indeed, in the interests of the most comprehensive cancer management, information accrued through this study is of the highest priority.

National Cancer Program Objective: C5, C6 Approaches: C5.1.2, C6.1.2
11. Project Officer: Dr. Mary Ann Sestili
12. FY 1977 Funds: \$134,031

GRANT SUMMARY

1. Title: Home Care for Child with Cancer
2. Principal Investigator: Dr. Ida M. Martinson
University of Minnesota
School of Nursing
3313 Powell Hall
Minneapolis, Minnesota 55455
3. Performing Organization: University of Minnesota
4. Grant Number: 1-R18-CA19490-01
5. Starting Date: 6/1/76
6. Expiration Date: 5/31/79
7. Objective: To identify the feasibility and desirability of the home as an alternative care facility to the hospital for families with a child who is dying from cancer.
8. Proposed Course: Under this plan, the parents become the primary care givers with the health professionals providing support. The aims of this study in assessing the option of home care to the family with a child dying of cancer include: determining the role(s) of the nurse and physician; identifying the most immediate problems for the child and other family members during home care; specifying the benefits and limitations of home care as perceived by the child, the rest of the family, the physician, and the nurse; contrasting the health care costs between care in the home and care in the hospital; exploring the interface of the project with existing health agencies giving services in the home, such as visiting agencies and hospital home care programs; and evolving a model system for delivering care to dying patients in the home.
9. Progress: It was anticipated that ten (10) patients would be accrued into study the first year. However, 26 children were referred during the first eight months of operation. Eighteen of these children have died; fifteen at home and three in the hospital. Home care for these children ranged from two to 40 days, or an average of 13 days. The support given by the professional nurse included a mean of eight home visits, ranging from one to 24, and an average of 14 telephone calls, ranging from five to 44. The mean number of hours of professional involvement was 20.6, ranging from seven and one-half to 56.

In a chart audit done in January 1977, of 12 children with cancer who died in the hospital, total actual last-hospitalization costs averaged \$12,000 per child. By contrast, the average cost for the 11 children who died at home was less than \$700, based on a \$35 per hour maximum cost used by the public health nursing agency and the University of Minnesota Home Care Department.

In each case involving death of the child at home, the child had either expressed the desire to remain at home, or the parents of the younger children decided that their child's behavior indicated that he was frightened of the hospital and wished to be at home. A contributing cause may have been that either the child, the parents, or both had experienced a "trying" hospital situation. Separation of a child from family and home environment during this crucial event -- the process leading to death -- is traumatic. During hospitalization the child and the rest of the family had limited control over what was happening. With home care, the parents had an opportunity for direct care of their child during the dying process.

The rewards of home care appear to be significant. There are practical economic benefits, such as the reduction in the financial cost of the care. Probably more important, there are a variety of psychological and social benefits which are often difficult to measure precisely. The child may receive the needed security and love stemming from the home environment without unnecessary separation. The parents, moreover, may derive inner satisfaction in fulfilling their child's wish to remain at home. This may help allay the sense of guilt which frequently follows the death.

The results of this study to date were presented at the American Cancer Society's Nineteenth Science Writer's Seminar in Sarasota, Florida on April 6, 1977.

During the second year, ten (10) additional families will be added to the study in the Twin Cities area and ten (10) families from out-of-state or rural Minnesota will be offered home care.

10. Significance for Cancer Control Program: This project is demonstrating an alternative to hospital care for children dying of cancer. This demonstrated change in the health delivery system, besides giving more satisfactory care to the patients, must be economically feasible. For this reason, a detailed record of home care costs will be kept by the principal investigator for purposes of comparison with costs of similar care in hospitals.
11. Project Officer: Mrs. J. L. Lunceford
12. FY 1977 Funds: \$76,431

GRANT SUMMARY

1. Title: Psychological Adaptations to Childhood Leukemia
2. Principal Investigator: Dr. George W. Marten
3. Performing Organization: St. Jude Children's Research Hospital
.332 North Lauderdale
Memphis, Tennessee 38101
4. Grant Number: CA 17881
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/78
7. Objective: The objectives of this study are to examine the characteristics of children with Acute Lymphocytic Leukemia (ALL) and to investigate the psychosocial factors effecting medical management and quality of life for these children and their families.
8. Proposed Course: The project intends to a) identify the psychosocial factors which lead to psychological difficulties in the parent-child relationship related to the stress created by the diagnosis of malignancy in the child, b) develop a short screening battery which, when administered upon admission, will identify high-risk mother-child units, and c) identify appropriate intervention techniques to alleviate psychological difficulties in these children. A developmental history of the child is obtained and psychological tests are administered to the mother and child to determine the profile of high-risk combinations.
9. Progress: Phase I of this project has been implemented. Mother and child units in this study population, who have a child at least five years of age, are being seen on the day following admission to the hospital. During this initial contact, rapport is established, the family is explained the objectives of the program, informed consent is obtained, and a social history of the child and psychometric evaluation is completed. After data analysis revealed by the specific test instruments included in this study, individually-oriented counseling intervention will be implemented and evaluated.
10. Significance for Cancer Control Program: Evaluate methods and techniques of cancer control in order to reduce morbidity associated with diagnosis and treatment of cancer.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$56,658

GRANT SUMMARY

1. Title: Coping in Families with A Leukemic Child
2. Principal Investigator: Dr. Jerome Schulman
3. Performing Organization: Children's Memorial Hospital
2300 Children's Plaza
Chicago, Illinois 60614
4. Grant No: 1-R18-CA 19344-01
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/81
7. Objective: The specific objective of this project is to provide fuller understanding of the variables involved in a family coping with leukemia in a child. Information on patients and family members will be drawn from interview sessions, observations of subjects via other personnel such as nurses, cafeteria cashier, etc., and home visits.
8. Proposed Course: This project will compare a comparison group of families with nonleukemic children to a longitudinal study of patients assigned to three levels of professional intervention, which include: (a) complete intervention, (b) moderate intervention, and (c) no intervention. The study intends to involve 160 leukemic children and 160 control cases over a five-year period from diagnosis through process. There is an emphasis in this study on health, coping, and adaptation as opposed to pathological orientation.
9. Progress: Clinical intervenors have been hired and trained and integrated into the routine and procedures of the hospital staff. The comparison group selected was bacterial meningitis because it has an acute onset with initial hospitalization, but has a differing prognosis (usually nonterminal). Seven leukemic patients are currently being followed in out-patient treatment and are seen by the Clinical-Intervenor at least once a week for the total intervention condition. Three meningitis patients have been followed from in-patient to out-patient phase. However, these are too few subjects at this time to perform any statistical analyses.
10. Significance to Cancer Control: To evaluate techniques of cancer control intended to reduce morbidity.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$77,334

GRANT SUMMARY

1. Title: Exploratory Studies for Rehabilitation of Cancer Patients
2. Principal Investigator: Dr. Joseph R. Castro
Mt. Zion Hospital and Medical Institute
Zellerback Saroni Tumor Institute
P.O. Box 7921
San Francisco, California 94120
3. Performing Organization: Mt. Zion Hospital and Medical Center
4. Grant Number: 5-R18-CA-16873-02
5. Starting Date: 4/1/75
6. Expiration Date: 3/31/77
7. Objective: This planning proposal will develop a three-pronged research, service and educational project directed at the psychosocial rehabilitation of cancer survivors and the improvement of the quality of life for those requiring continuing or terminal care. Further knowledge about the psychosocial course and casualty rate will be generated utilizing age and life stage groupings as well as groupings by disease site and prognosis. In a two-phase retrospective study, the psychosocial adaptation of patients and their families will be examined in preparation for the development of a prospective study.
8. Proposed Course: Using the clinical method which includes semistructured interviews and selective psychological testing, the degree, nature and extent of psychosocial disability and adaptation will be determined. A network of linked psychological and social services will be developed and their effectiveness assessed.
9. Progress: Exploratory and feasibility phase completed. Data collected now being analyzed for final report. New grant application submitted to continue work. Three-month extension granted for completion of present grant.
10. Significance for Cancer Control Program: Educational concepts, models and programs will further the interdisciplinary staff's effectiveness in providing effective patient care.
National Cancer Program Objective: C6, C7 Approaches: C6.1, C7.2
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$97,692

GRANT SUMMARY

1. Title: Psychosocial Aspects of Cancer Rehabilitation
2. Principal Investigator: Dr. Allen Enelow
West Coast Cancer Foundation
P.O. Box 7999
San Francisco, California 94120
3. Performing Organization: West Coast Cancer Foundation
4. Grant Number: 5-R18-CA-17903-02
5. Starting Date: 6/1/75 6. Expiration Date: 5/31/78
7. Objective: The purpose of this grant is to apply research into some of the psychosocial aspects of cancer rehabilitation in one community in northern California (Chico). The ultimate goal of the research is to apply some of the principles of behavioral science research so as to improve the quality of cancer rehabilitation for patients.
8. Proposed Course: This will be accomplished in three phases or activities: (1) assessment and identification of knowledge, attitudes and behaviors for intervention program, (2) program planning for intervention areas and (3) evaluation of program outcomes and will develop intervention strategies and programs based on behavioral research within local communities and implement these programs on a community basis. The programs will be aimed at changing the behavior of health professionals, volunteer organization members and the general public including cancer patients and their families.
9. Progress: Reformulation of the study design, completion of survey of 53 San Joaquin county physicians, completion of interview-based inventory of social services and health care agency in San Joaquin county (30), obtainment of completion of five hospitals in San Joaquin county for purpose of identifying patients and identifying patient sample, obtainment of approval of human subjects for the research protocol, interview schedule among participating hospital community, completion for West Coast community services of almost 300 face-to-face interviews with cancer patients, and addition of community-based intervention program to meet identified needs of cancer patients.
10. Significance for Cancer Control Program: To demonstrate a systematic application of psychosocial principles to the rehabilitation of cancer patients.

National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$185,000

GRANT SUMMARY

1. Title: The Psychosocial Rehabilitation of Oncologic Patients
2. Principal Investigator: Dr. Raphael Good
University of Miami
School of Medicine
Miami, Florida
3. Performing Organization: University of Miami
4. Grant Number: 5-R18-CA-17869-02
5. Starting Date: 6/1/75 6. Expiration Date: 5/31/78
7. Objective: The objective of this study is to demonstrate the effectiveness of individual and group intervention techniques in improving the level of psychosocial functioning of cancer patients and their families. The study will be divided into three major areas of interest: Study Group I - Gynecologic Oncology; Study Group II - Pediatric Oncology; and Study Group III - General Oncology (patients seen through the Family Medicine Program).
8. Proposed Course: The subjects (patients and/or families) will be assessed for psychosocial functioning at the outset through the use of standard psychological tests and interview techniques. Levels of intrapsychic, interpersonal, interfamilial, and social functioning will thus be determined. Following initial assessment, appropriate intervention techniques will be instituted to attempt to improve the level of psychosocial functioning of the patient and his family. Appropriate feedback systems and final intra- and inter-Study Group evaluations will be utilized to assess both the ongoing and ultimate impacts of the interventions in improving the psychosocial functioning of the cancer patients and their families.
9. Progress: Since June, 1975, to February, 1977, project has acquired data on 64 subjects in Group II and 58 subjects in Group III. Analysis of findings from these groups is in process.
10. Significance for Cancer Control Program: Educational concepts, models and programs will further the interdisciplinary staff's effectiveness in providing effective psychosocial patient care.
National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$227,513

GRANT SUMMARY

1. Title: Psychological Adjustment of Radiotherapy
2. Principal Investigator: Dr. Jimmie Holland
3. Performing Organization: Montefiore Hospital and Medical Center
Bronx, New York
4. Grant Number: 1-R18-CA-18329-01
5. Starting Date: 9/1/75
6. Expiration Date: 8/31/76
7. Objective: The purpose of this study was to determine if brief pre-treatment orientation by the radiation therapist concerning the rationale of treatment, the technique and modality to be employed, and the experienced side-effects, etc., would have a significant effect in reducing anxiety and fear associated with this treatment.
8. Proposed Course: Patient referred to the radiotherapy department for treatment of breast cancer will be evaluated by a brief interview and a 5 minute verbal sample which will be analysed by the Gottschalk-Gleser technique of content analysis. This procedure will be used to assess patients prior to their first treatment, during the second week and at the end of treatment, approximately 6 weeks. Women will be randomly allocated to receive either: Group A, no intervention, Group B, orientation by a radiotherapist or Group C, supportive psychiatric interview.
9. Progress: Twenty-five women referred for radiotherapy treatment for breast cancer and 4 for gynecological cancer were evaluated and given one of the three interventions. Interpretation of mean scores for the 25 women examined at three different times revealed that women at 2 and 6 weeks showed significantly higher levels of hostility-outward (expressed anger), hostility-inward (depression), than prior to treatment. Mutilation anxiety diminished over the 6 weeks and separation anxiety increased. Findings indicate the likelihood that, contrary to clinical impression, patients are not emotionally more secure as they approach the end of a course of post-operative radiotherapy following mastectomy or surgery for gynecological cancer. The feelings likely are generated by the feeling of losing frequent contact with familiar staff and more vulnerability to the disease when active treatment ceases. Results from a 21-patient substudy, half of whom received pretreatment orientation and half who received no planned intervention, revealed a decrease in diffuse anxiety after orientation while those who received no orientation showed an increase in mutilation anxiety while waiting in the clinic.
10. Significance to Cancer Control: Assessment of efficacy of cancer control psychosocial intervention strategies.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: Coping and Cancer: A Process Oriented Approach
2. Principal Investigator: Dr. Richard S. Lazarus
3. Performing Organization: University of California
Berkeley, California 94720
4. Grant Number: CA 19362
5. Starting Date: 7/1/77 6. Expiration Date: 6/30/81
7. Objective: The specific objective of this project is to generate behavioral approaches to understand and influence survival in cancer patients, to reduce cancer risk through coping with life stress and to better understand the coping factors that might influence the quality of life for such patients. The particular tasks of the study will focus on investigating whether stress and coping have anything to do with the disease progression as well as with adjustment to the disease, the risk of cancer, or the susceptibility to illness in general.
8. Proposed Course: The project will combine a traditional epidemiological approach with process-oriented in-depth clinical studies of the same individuals over time. Two main groups will be studied: 1) persons referred for cancer diagnosis and 2) a matched control group without suspicion of cancer. These groups will be further divided into two cohorts, one with a recent pattern of high life stress, the other reporting low life stress, aside from the present possibility of cancer. Smaller subsamples will be selected for intensive psychological study over a three-year period during which close attention will be paid to the daily stresses they must face, their emotional patterns, patterns of coping, overall quality of adjustment, and their cancer and general health status. Analysis will focus primarily on relating patterns of stress and coping to life circumstances, personality characteristics, and behavior adjustment.
9. Progress: The project is to begin this month and has no results to present.
10. Significance for Cancer Control Program: Evaluate techniques and methods of reducing morbidity in cancer patients.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$183,217

GRANT SUMMARY

1. Title: Humanistic Oncology - The Omega Experience
2. Principal Investigator: Dr. Margaret W. Linn
3. Performing Organization: Veterans Administration Hospital
1201 N.W. 16th Street
Miami, Florida 33125
4. Grant Number: CA 19550
5. Starting Date: 6/1/76
6. Expiration Date: 5/31/79
7. Objective: The three objectives of this project include a) to determine if late stage cancer patients discharged from hospitals to nursing homes differ from those who return to their own homes, b) to assess outcomes of patients who go to either setting and c) to evaluate effectiveness of social intervention in a randomly assigned group of dying patients from both settings.
8. Proposed Course: Baseline ratings will be taken in the hospital and will include physical function, life expectancy, psychosocial function (depression, life satisfaction, alienation, self-concept, and locus of control). Families will be assessed on family functioning and economic dimensions. Patients will be followed as long as the patient lives at 3, 6, 9, and 12 months. Social intervention will be aimed at opening communication between patient and family, offering support and enhancing self-esteem. Cost-benefit data will be developed to assess the actual and social cost of caring for patients in either setting.
9. Progress: The clinical intervenors have been hired and integrated in the routine and procedure of the hospital setting. Instruments have been selected for evaluating the differences in patients placed in nursing homes and those with their families. Several male patients from the University of Miami Veterans Administration Hospital have been admitted into the study. The patient sample is too small yet for statistical analysis.
10. Significance for Cancer Control Program: Evaluate psychosocial interventions in cancer patients who are terminal.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$92,014

GRANT SUMMARY

1. Title: Processes of Health Behavior and Cancer Control
2. Principal Investigator: Dr. Leo Reeder
3. Performing Organization: University of California
School of Public Health
Los Angeles, California
4. Grant Number: R18 CA 18451
5. Starting Date: 12/01/75
6. Expiration Date: 11/30/80
7. Objective: The specific objective of this project is to link the steps on the continuum of health status to health behavior to utilization to compliance. Two major components are proposed: a panel study of the social processes in the individual's decisions about health and a trend study to observe in a population the aggregate changes in such sociomedical indicators as health status, use of health services, regular sources of medical care, medical coverage of health insurance and compliance with medical advice.
8. Proposed Course: The panel-control group procedure combined with the trend analysis technique is expected to yield more reliable information than reliance on one single method alone. Information will be collected on the beginning and end points of illness episodes and the decision-points involved in the use of health services. Trend analysis of certain subjects will permit examination of dynamics of attitudes that are often situationally related and obscured by use of cross-sectional data alone. The design includes plans to empanel a random probability sample of approximately 1200 adults. This sample will be interviewed at monthly intervals, using the telephone for a one year period in order to collect data on social, cultural and social-psychological processes involved in health behavior of the sample persons as they may change their health status, use of health services, compliance, or rehabilitation. The trend study permits a) a baseline for assessing certain variables independent of the panel survey, b) the establishment of the panel population sample, and c) the use of those persons as a control population for panel effects.
9. Progress: Currently data has been collected from 1200 respondents who will be reinterviewed every six weeks by telephone. The original interview was a household interview and the response rate was 85%. In addition, data were collected from a control group of 300 respondents who will not be interviewed again. Data are currently being coded and keypunched for electronic computer processing and the Health Survey Questionnaire and Memory aid have been completed.
10. Significance for Cancer Control: Evaluate methods of health surveying which has direct relevance to cancer control programs of prevention and rehabilitation.

11. Project Officer: Dr. Wendy Schain

12. FY 1977 Funds: \$143,237

GRANT SUMMARY

1. Title: Psychosocial Collaborative Group for Cancer Control
2. Principal Investigator: Dr. Arthur Schmale
3. Performing Organization: University of Rochester Medical Center
601 Elmwood Avenue
Rochester, New York 14642
4. Grant No: CA 19681
5. Starting Date: 7/1/76
6. Expiration Date: 6/30/78
7. Objective: The specific objective of this program was to gather together five already established investigators into a collaborative endeavor to study psychosocial factors in the care of cancer patients and to develop protocols to be used at the five different participating institutions (West Coast Cancer Foundation; Johns Hopkins Hospital; Montefiore Hospital and Medical Center; Peter Bent Brigham Hospital; and University of Rochester Medical Center). Investigation of significant issues in the area of psychosocial factors in cancer control on such a large patient population should provide a reliable data base in this area.
8. Proposed Course: The first year is intended to establish the feasibility of a collaborative effort in developing communication network among participants and in establishing objectives of protocols to be developed and eventually implemented. Efforts will be directed at working out issues unique to group and collaborative interaction and establishing integration between their research/program people and the statistical/resource center component of the project.
9. Progress: Currently this group has demonstrated collaborative agreement in (a) crystallizing objectives, (b) establishing a constitution and field of study, (c) designing and testing out efficient communication procedures, and (d) outlying areas of scientific inquiry requiring further exploration. In addition, the group has accepted its first protocol to evaluate the status of psychotropic drugs in treating cancer patients: how effectively they are being utilized, by whom, and for what purpose. There are several other protocols being considered for investigation and the participants have already completed a study of rating scales used in evaluating functioning of cancer patients. The instruments evaluated were global rating measures scored by a trained examiner who assessed patient functioning from clinical interviews which were video-taped and sent to all five participating institutions for assessment.
10. Significance: Evaluation of techniques of cancer control and the feasibility of collaborative research in psychosocial oncology.
11. Project Officer: Dr. Wendy S. Schain
12. FY 1977 Funds: \$337,830

GRANT SUMMARY

1. Title: Psychosocial Interventions in Cancer Care
2. Principal Investigators: Dr. Avery D. Weisman & Dr. J. Wm. Worden
3. Performing Organization: Massachusetts General Hospital
Fruit Street
Boston, Massachusetts 02114
4. Grant Number: R18 CA19797-01
5. Starting Date: 1/1/77
6. Expiration Date: 12/31/79
7. Objective: The specific objective of this program is for a demonstration of interventions with patients who have newly diagnosed carcinoma of the breast, colon, Hodgkin's disease or malignant melanoma and who have been identified by a previously used screening instrument as being at high risk of emotional disturbance.
8. Proposed Course: There will be intervention for randomly selected patients who will receive either a) Eclectic counseling/psychotherapy or b) Cognitive-restructuring approach to their disease and coping maneuvers. The planned intervention strategies are intended to counteract distress, strengthen coping behavior, and improve resolution of conflicts imposed by the patient's disease. Other patients with recurrent disease will be assessed at the point of recurrence and followed at regular intervals. The psychosocial impact of diagnosis will be compared descriptively with that of recurrence. Identification and screening of the high risk recurring patient will be made.
9. Progress: The project is currently identifying the target population to assign to the different intervention strategies.
10. Significance to Cancer Control Program: To identify and evaluate methods and techniques of cancer control intervention.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: \$247,096

GRANT SUMMARY

1. Title: Suicide and Other Coping Behavior of Cancer Patients
2. Principal Investigator: Dr. Avery D. Weisman and Dr. J. William Worden
3. Performing Organization: Massachusetts General Hospital
Boston, Massachusetts 02114
4. Grant Number: 3-R18-CA-14104
5. Starting Date: 6/30/75
6. Expiration Date: 2/28/77
7. Objective: Specific objectives of this program were to determine ways in which newly diagnosed cancer patients cope (or fail to cope) with different psychosocial problems at various stages of illness. Physical status, not manifest psychiatric symptoms, guided selection of patients with cancer of the breast, colon, lung, Hodgkin's Disease and malignant melanoma. The aims of this project are to identify A) the most vulnerable cancer patients, B) what medical and non-medical factors influence their distress, C) when do points of maximum distress occur, D) what are the determining forces in producing maximum distress, E) what are the significant areas of problems and concerns, F) how do patients cope with predominant problems, G) how important is denial in successful coping and H) are there reliable predictors at diagnosis which will identify future vulnerability?
8. Proposed Course: The program contained several phases to identify and assess patient's coping and vulnerability with respect to their cancer diagnosis and treatment(s).
9. Progress: The project was completed in December, 1976 and reported findings on 163 patients who completed this study. Patients were initially evaluated within 10 days after hospital admission and confirmation of the diagnosis. Psychological testing ensued and included a semi-structured interview, the Minnesota Multiphasic Inventory (MMPI) and the Thematic Apperception Test (TAT); rating scales; and inventory of predominant concerns (IPC; a test of general coping strategies (COPE); and index of vulnerability (VUL), and the Profile of Mood States (POMS). There was a follow-up evaluation at 4-6 weeks intervals extending to six months after the date of diagnosis. After this period, patients were contacted at intervals of approximately 3 months. Patients experiencing recurrence were singled out for special study. Considerable information was generated by the longitudinal nature of this project.
10. Significance to Cancer Control: To identify patients with high levels of emotional distress associated with the diagnosis and treatment of their disease and to ultimately determine psychosocial interventions planned to reduce morbidity.
11. Project Officer: Dr. Wendy Schain
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: Clerical Counseling of the Cancer Patient
2. Principal Investigator: Dr. Charles W. Halbrook
Cancer Research Center
Ellis Fischel State Cancer Hospital
Business Loop 70 & Garth Avenue
Columbia, Missouri 65201
3. Performing Organization: Cancer Research Center
4. Grant Number: 1-R18-CA20381-01
5. Starting Date: 3/5/77 6. Expiration Date: 8/31/78
7. Objective: To assess the level of understanding the clergy now has in regard to the various psychosocial problems of the cancer patient, establish the educational/counseling needs of the clergy and the cancer patient and produce an educational seminar series and/or publications to meet those needs.
8. Proposed Course: To survey fifty members of the clergy and fifty cancer patients to do a needs assessment for developing educational programs and/or publications and will conduct four educational programs with subsequent publications.
9. Progress: The questionnaires have been developed, sent out and returned. Data is being analyzed. Develop education materials for four seminars.
10. Significance for Cancer Control Program: Increase the awareness of community clergyman to the needs of cancer patients and increase their comprehensiveness in meeting these needs. Aids community rehabilitation.

National Cancer Program Objective: C6 Approaches: C6.1
11. Project Officer: Lawrence D. Burke
12. FY 1977 Funds: \$10,448

GRANT SUMMARY

1. Title: Effects of Biofeedback and Hypnosis on Cancer Pain
2. Principal Investigator: Dr. Mary Cook
Midwest Research Institute
Behavioral Sciences Lab
425 Volker Boulevard
Kansas City, Kansas 64110
3. Performing Organization: Midwest Research Institute
4. Grant Number: 2-R18-17936-02
5. Starting Date: 06/01/75
6. Expiration Date: 03/31/79
7. Objective: This project will evaluate the efficacy of biofeedback and hypnosis for the relief of chronic pain associated with cancer.
8. Proposed Course: Patients in the biofeedback experimental group receive sessions of combined EEG/EMG feedback intended to enhance voluntary control of pain. The two experimental hypnosis groups consist of individuals with high or medium degrees of hypnotic susceptibility. Two control groups, one for biofeedback, one for hypnosis are matched as closely as possible for age, sex and type of cancer. Assessments prior to, during and after intervention include physiologic measures, psychological testing, and subjective pain estimates based on the McGill Pain Questionnaire. Appropriate procedures are used to separate active versus placebo effects.
9. Progress: Accurate, quantitative biofeedback equipment has been designed and tested. The pretreatment test batteries were piloted (N-12) and protocols developed. Pilot testing of biofeedback procedures with 11 normal subjects (some in pain) and one cancer-pain subject resulted in the development of an adequate protocol. Standardized hypnotic assessments were given to 30 individuals. The experimental hypnosis treatment was given to two cancer pain subjects, with marked pain reduction being obtained in the laboratory and positive transfer evident outside the laboratory. Major progress was made in evaluating radioimmunoassay techniques for analysis of salivary cortisol and in designing special salivary collection devices. Saliva cortisol levels were associated with emotional stress but not with physical exertion. The use of biofeedback with 12 pilot cancer pain patients was analyzed and the findings reported at the International Symposium on Cancer Pain. Initial subject recruitment procedures were expanded to include large medical centers, and the project is now well underway.

10. Significance for Cancer Control: Research on the management of cancer pain is a major support function of DCCR. These innovative approaches to pain control are non-invasive, may lead to a decreased requirement for pain medications, and provide effective intervention tools for comprehensive cancer pain programs in treatment, rehabilitation and continuing care.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$72,605

CRANT SUMMARY

1. Title: Pain Control Through Hypnosis in Childhood Cancer
2. Principal Investigator: Dr. Ernest Hilgard
Stanford University
Dept. of Psychology
Stanford, California 94305
3. Performing Organization: Stanford University
4. Grant Number: 1-R18-CA-18325-02
5. Starting Date: 09/01/75 6. Expiration Date: 08/31/78
7. Objective: To determine the usefulness of hypnotic techniques for the relief of distress in children undergoing treatment for cancer.
8. Proposed Course: Two groups, one suffering from solid tumors and the other from leukemia, will be studied. Following initial comprehensive assessment, each child will be measured for hypnotic responsiveness using the children's scale of hypnotic responsiveness which has been developed and is undergoing standardization on the normal child population at the Laboratory of Hypnosis and Research and the Department of Psychology, Stanford University. The medical and nursing input for best utilization of hypnotic procedures for each child will be developed through a staff meeting. The effectiveness of the approach will be assessed in order to better define the usefulness of this technique in this special population.
9. Progress: Thirty-four children have been evaluated under the study. Several problems have been identified: (1) Standard approaches of hypnosis are less applicable to children under age 6, (2) children who have been under treatment often have severe negative emotional conditioning requiring attention, going on to near-panic anxiety prior to treating the pain itself. Despite these problems preliminary results indicate significant relief of pain and anxiety in children who can be hypnotized. Alternate hypnosis related techniques are being evaluated in younger children. The Clinical Scale of Hypnotic Responsiveness is being refined for use with older children.
10. Significance for Cancer Control Program: Hypnosis may provide an important approach to alleviating pain and the severe anxiety associated with treatment procedures in children as well as adults. If successful it could contribute to improved treatment, rehabilitation and continuing care of cancer patients. Identification of such potentially applicable intervention is a major goal of DCCR.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$30,860

GRANT SUMMARY

1. Title: Electrical Analgesia for Intractable Pain
2. Principal Investigator: Dr. Ronald Ignelzi
University of California at San Diego
Department of Psychiatry
La Jolla, California 92093
3. Performing Organization: University of California at San Diego
School of Medicine
4. Grant Number: R18 CA 18866-02
5. Starting Date: 6/1/76 6. Expiration Date: 5/31/78
7. Objective: To gain an understanding of the mechanism of peripheral electrical nerve stimulation induced analgesia.
8. Proposed Course: Both human clinical and experimental animal studies are involved. These include: (1) quantitative neurological sensory examination of patients who use transcutaneous neurostimulators for relief of benign pain, to determine the nature and extent of sensory changes caused by electrical stimulation; (2) measurement of cortical evoked potentials in patients who use transcutaneous neurostimulators; (3) studies of peripheral nerve evoked potentials in animals with and without neurostimulation; and (4) studies of axoplasmic transport in peripheral nerve following electrical stimulation.
9. Progress: Patients and control groups are being analyzed for changes in somatosensory perception through a computerized analysis based on sensory decision theory. EEG Analysis studies are underway. Data has been recorded from 79 neurons in anesthetized cats. There is preliminary evidence for inhibited discharge of nociceptive fibers. Axoplasmic transport studies at this time are inconclusive.
10. Significance for Cancer Control: Research developments in new methods of analgesia have potential application for the relief of cancer related pain. Identification of such useful interventions is an important goal of DCCR.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$59,822

GRANT SUMMARY

1. Title: Pain Control in Cancer Patients
2. Principal Investigator: Dr. Wolff Kirsch
University of Colorado Medical Center
4200 East Ninth Avenue
Denver, Colorado 80220
3. Performing Organization: University of Colorado Medical Center
4. Grant Number: R18 CA20370-01
5. Starting Date: 12/1/76 6. Expiration Date: 11/30/79
7. Objective: To attempt precise identification of neurophysiological and perceptual events that accompany the analgesia produced by peripheral nerve stimulation.
8. Proposed Course: Attention will be directed to cancer patients with extremity pain secondary to cancer and cancer associated surgery such as amputation. Electrophysiological activity evoked in the peripheral nerve and cerebral cortex will be recorded in response to stimulation of the nerve and the following factors will be measured: (1) Nerve threshold; (2) Analgesic threshold; (3) Cortical threshold; (4) Sensory threshold; (5) Peripheral nerve components and cerebral cortical activity associated with modification of pain perception.
9. Progress: The grant is in its initial implementation.
10. Significance for Cancer Control: Research developments in new methods of analgesia will contribute to the relief of cancer related pain. Identification of such useful interventions is an important goal of DCCR.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$39,977

GRANT SUMMARY

1. Title: The Comparative Use of Supportive Drugs in Cancer Patients
2. Principal Investigator: Dr. William Regelson
MCV Station Box 273
Medical College of Virginia
Richmond, Virginia 23298
3. Performing Organization: Medical College of Virginia
4. Grant Number: R18 CA 19378-01
5. Starting Date: 5/1/76
6. Expiration Date: 4/30/79
7. Objective: To establish the efficacy of supportive drugs to alleviate problems of pain, depression, anorexia, nausea, emesis, insomnia and loss of libido that accompany cancer and its therapy.
8. Proposed Course: This program will evaluate new drugs as well as better dose treatment parameters of established supportive drugs. The analgesic phase will evaluate butorphanol tartrate versus demerol or percodon. The anti-anxiety and anti-depressant drugs study phase will compare promising new agents with a placebo and/or well established drugs. Techniques to be used in evaluating drug effects include single dose pain assay (Houde), portions of the N.I.M.H. psychopharmacologic assay, the Bender-Gestalt, taped semi-structured psychiatric interviews with ratings rendered in blind fashion, Stanford Sleep Assay, as well as assays to quantify nausea, anorexia and libido. Assays will be made by a Supportive Drug Team including psychologists and psychiatrists utilizing techniques which permit double-blinding, and objective or subjective evaluation without disruption of patient management.
9. Progress: This grant is in initial implementation.
10. Significance for Cancer Control: Research into improved methods for patient rehabilitation and continuing care is a major support function of DCCR. If successful these studies will be widely applicable to cancer patients.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$58,568

GRANT SUMMARY

1. Title: Cancer Rehabilitation through Pain Control
2. Principal Investigator: Dr. Hubert L. Rosomoff
Department of Neurological Surgery
University of Miami School of Medicine
P.O. Box 520875, Biscayne Annex
Miami, Florida 33152
3. Performing Organization: University of Miami School of Medicine
4. Grant Number: R18 CA 17935-01
5. Starting Date: 6/1/76 6. Expiration Date: 5/31/79
7. Objective: To develop a successful rehabilitation program for cancer patients with chronic pain.
8. Proposed Course: Proven methods of pain relief for benign chronic diseases will be applied singly and in combination for cancer patients with intractable pain requiring narcotics. These include: (a) non-invasive methods for pain control, such as transcutaneous neural stimulation; (b) antidepressant psychotropic medication (amitriptyline hydrochloride and fluphenazine hydrochloride); and (c) behavioral control of aversive affect, cognition and maladaptive pain behavior. Criteria for success will be improving the comfort, mood, activity level, health and possible longevity of these patients without reliance on narcotic medication.
9. Progress: This grant is in initial implementation.
10. Significance for Cancer Control: Pain control is an essential component of successful treatment, rehabilitation and continuing care for cancer patients. Identification of effective intervention techniques for widespread application is a primary goal of DCCR.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$66,412

GRANT SUMMARY

1. Title: Evaluation and Control of Chronic Pain in Cancer
2. Principal Investigator: Dr. B. Berthold Wolff
New York University Medical Center
550 First Avenue
New York, NY 10016
3. Performing Organization: New York University Medical Center
4. Grant Number: 1-R18-CA20652-01
5. Starting Date: 1/1/77 6. Expiration Date: 12/31/79
7. Objective: To evaluate four different treatment modalities for patients with intractable pain secondary to cancer.
8. Proposed Course: Four different types of treatment categories will be investigated: (1) analgesic medication supplements, (2) transcutaneous electrical nerve stimulation, (3) acupuncture, and (4) psychological interview and supportive psychotherapy. Treatment categories will be assessed for a defined time period; patients who respond to one treatment category will be eliminated from the study; unresponsive patients will be continued on other types of therapies, such as local nerve blocks and perhaps surgical intervention. The experiment will include trials with combinations of therapies for pain control. A psychosocial study of rehabilitation potential after various modalities of therapy will be conducted.

The project goals are to evaluate both qualitatively and quantitatively a given patient's perceptions, attitude, and behavioral reactions to his clinical pain, disfigurement and to the disease by means of semi-structural psychological interviews and personality tests; to evaluate the cancer pain patient and his family psychosocially with special reference to those socio-cultural milieu aspects which significantly contribute to his response of pain; to objectively and quantitatively assess the cancer patient by means of standard laboratory pain inducing methods measuring several behavioral pain response parameters, such as the pain threshold, pain tolerance and pain sensitivity range; to modulate a patient's analgesic and/or cancer medications to yield a drug baseline; to study the effects of certain anti-inflammatory medications; to determine the various pain response parameters of adult health volunteers; to provide a multidisciplinary pain consultation service for cancer patients with chronic pain at the New York University Medical and Dental Centers; and finally to offer training to medical and dental students, hospital staffs, post-doctoral fellows, nurses and other allied health professionals in the anatomical, physiological, pharmacological, behavioral and social mechanisms of pain, the laboratory techniques of pain, the various therapeutic modalities available for pain relief, and the clinical management of pain problems.

9. Progress: This grant is in initial implementation.
10. Significance for Cancer Control Program: Research in the understanding and management of cancer pain is a major support function of DCCR. Information derived from these proposed studies should benefit cancer patients greatly through contributions to treatment, rehabilitation and continuing care.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: \$115,931

GRANT SUMMARY

1. Title: First International Symposium on Cancer Pain: Florence, Italy
2. Principal Investigator: Dr. John Bonica
University of Washington
Dept. of Anesthesiology
Seattle, Washington 98195
3. Performing Organization: University of Washington
4. Contract Number: 1-R13-CA-18731-01
5. Starting Date: 06/30/75 6. Expiration Date: 06/29/76
7. Objective: To provide a symposium where the state-of-the-art could be clearly delineated and the deficiencies currently existing pinpointed for the benefit of the Division of Cancer Control and Rehabilitation as well as suggesting possible ways to improve the cross fertilization between the varieties of health professionals concerned with cancer pain.
8. Proposed Course: The holding of the symposium at the completion of an International Pain Conference provided the opportunity for participation on a worldwide basis at minimal cost to the Government. The materials presented are in the process of being edited for publication in order to better promote further interest, understanding, and an improvement in the current management of pain in cancer.
9. Progress: The meeting was held with excellent participation in considerable depth. The reports are in the process of being transcribed and edited.
10. Significance for Cancer Control Program: The first major effort, other than a single investigator-initiated activity, to broadly encompass the concerns of those involved with cancer pain.
11. Project Officer: Donald N. Buell, M.D.
12. FY 1977 Funds: -0-



III.

COMMUNITY PROGRAMS



Section III

COMMUNITY ACTIVITIES

The programs in this segment of the Division of Cancer Control and Rehabilitation (DCCR) focus on the demonstration and promotion of field tested and evaluated cancer control interventions in selected community settings. These more comprehensive programs complement the Intervention Programs by demonstrating the value of more integrated and coordinated approaches to cancer control. In this approach to programming, the community functions as a "laboratory" for developing successful models for the organization and coordination of broad-based cancer control and rehabilitation efforts. These programs are extensive tests for obtaining insight into the management of cancer in a large scale environment and are not service programs or simple repetitions of the single and multiple intervention networks discussed elsewhere in this report.

It is expected that programs in this area will yield significant benefits to the involved populations and will provide demonstrated approaches to community-wide cancer control effort, which may be promoted in other areas of the country. These programs are focused on: 1) outreach education, consultation, and informational services to hospitals, practitioners, and the public; 2) interdisciplinary management at the community level through improved patterns of referral which make use of ongoing programs in areas such as screening, treatment, rehabilitation, etc.; 3) systematic modern intervention through the application of protocols at the community level; and 4) quality control of interventions through activities such as conferences, lectures, tumor board meetings, clinical rounds, etc.

The efforts are being carried out using two program strategies, the Community-Based cancer control approach and the Comprehensive Cancer Centers Outreach approach. Each of these approach strategies has been assigned a separate Branch within Community Activities, the Community Resources Development Branch and the Community Special Projects Branch, and are discussed in the following Branch summaries.



COMMUNITY RESOURCES DEVELOPMENT BRANCH

This fiscal year was a period of program development and funding growth for the Community-Based Cancer Control Program (CBCCP), the major programmatic activity of the Community Resources Development Branch. The first two Phase II implementation contracts for the CBCCPs were awarded in June 1976, to the Michigan Cancer Foundation in Detroit and the University of New Mexico. They have since moved ahead in implementing CBCCPs. Seven Phase I (planning) contractors submitted their plans for review in the period July through September 1976. Throughout the fall they were given a primary review, site visit, and final review by the Community Activities Review Committee (CARC), a peer review group comprised of non-Government experts. One more community submitted its plan in December 1976, and went through the same review process. At the conclusion of the review cycle, the Long Island Cancer Council was considered ready for immediate implementation and has since been awarded a phase II contract; Los Angeles, Hawaii, Rhode Island, and Connecticut were awarded additional planning time in which to complete the phase I planning tasks; and four of the CBCCPs in the planning stage were not considered ready for implementation funding at this time. Los Angeles, Hawaii, and Rhode Island completed this additional planning cycle and a go ahead for the implementation phase was given by the CARC peer review committee and the DCCR Selection Panel. Contracts for five years of performance will be negotiated within FY 1977.

The CBCCP is a large-scale community demonstration, organized to test the hypothesis that the coordinated community application of appropriate verified control technologies in dealing with selected cancers will be more efficacious than fragmented approaches to cancer control; and that organized multi-institutional programs involving community hospitals and physicians, as well as more experienced cancer hospitals, can impact cancer management on a broad community-wide basis.

The major characteristics of each CBCCP are as follows:

- An ability to implement proven and practical cancer control interventions
- A data system sufficient for meeting evaluation requirements of a CBCCP
- A well-organized, cooperative arrangement of all cancer related interests in the community to assure maximum coordination of all cancer control activities in that community
- A mechanism for transfer of cancer knowledge and technology for the cancer community, the patients, medical and allied health professionals.

The CBCCP is a program which cooperatively links all cancer related interests in a community of 1.5 to 3 million people--including, but not

limited to schools, industry, labor, voluntary health agencies, third party payors, the public, and cancer patients and their families. During the planning period, each CBCCP collected and made an analysis of demographic and epidemiologic data related to cancer, selected relevant disease sites, developed an organizational structure and went through an intensive period of program planning. The outcome of all this was a blueprint for coordinating all cancer control activities in the community. This meant that it was necessary to carefully examine the state-of-the-art for each cancer control intervention, prevention through continuing care, to determine what should be done versus what was currently being done; and to enhance, reduce or modify programs accordingly. Although the CBCCP cannot provide services directly or in any way mandate providers of service, it is expected that voluntary community planning and participation will reduce fragmentation, duplication, and inconstancy in cancer control programs.

The CBCCP differs from the comprehensive centers outreach program and numerous organ site intervention programs by providing selected test communities with resources for planning and developing a program that focuses the cooperative efforts of available medical services, resources, and institutions and associations to provide demonstrations of what can be accomplished by applying a full range of integrated interventions against three to five selected cancers. As the effects of the integrated approach are assimilated by the community, additional proven interventions and other organ site cancers may be added over a five-year period.

The integration of interventions can be described as follows: The CBCCP will identify, as completely as possible, the number of high risk individuals in a community or sector thereof. Extensive efforts will be made to ensure that this entire group receives information on how to prevent the occurrence of cancer and (if that is possible) what screening techniques are appropriate to the disease site which is at risk. All potential patients identified by the screening programs will receive appropriate followup and referral into the cancer control system. Those in need of further diagnosis and pretreatment examination will be encouraged to take advantage of this available service. Those diagnosed as having cancer will be referred for treatment, while others will return for screening visits on an organized, periodic basis. Patients receiving treatment will be referred for rehabilitation and continuing care as needed and appropriate. This process will be replicated for all selected disease sites on a periodic, recycling basis. Evaluation of the outcomes will respond to the original hypothesis of this approach to cancer control and program modifications may result, as directed by such comparison.

A community referral system and data base will provide the capability for long-term followup of high risk persons and cancer patients and improving patient flow through cancer control programs and facilities.

The implementation plans being developed by the phase I contractors include the following approaches:

- Public education to increase knowledge and facilitate positive behavior change

- Outreach to specific groups of high risk persons within the selected communities with very strong emphasis on reaching and following up individuals at high risk to those cancers selected by the projects
- Outreach to local practitioners and health professionals to ensure the application of available facilities, expertise, optimum treatment protocols, and training programs
- Screening programs for cancer sites where detection of cancer at an early stage of development greatly improves survival and quality of life
- Proven treatment, continuing care, and rehabilitation interventions using patient management techniques and therapies which have been field tested in other control programs
- Coordination activity that attempts to make use of the best capabilities of all community resources and maintains optimal protocols
- Management of a data system that will provide data needed for evaluation of the program.

Since the CBCCP is a demonstration program whose lessons will be promoted in other communities throughout the United States, evaluation is an essential component of the program. It informs both the local CBCCP and the Division of Cancer Control and Rehabilitation (DCCR) of how efficiently the program is meeting its objectives and indicates the outcomes and impacts of the programs. Each program is required to develop an evaluation plan. The Community Activities staff have worked extensively with New Mexico and Michigan staff to refine their evaluation plans. Toward this end, the Community Resources Development staff developed an "Outline for Development of a Management and Evaluation Plan" which contains DCCR guidelines. The CBCCPs are expected to evaluate: the coordinated use of all interventions; the transfer of cancer knowledge and technology; and the impact of the CBCCP on the cancer community, the patients, and medical and allied health professionals. The outline provides a common semantic framework, an evaluation format, and offers examples of objectives and associated process, outcome, and impact indicators.

In evaluation, planning, and program development, DCCR staff provide technical assistance through regular site visits, contractors' meetings, phone calls, progress reports, and recently initiated the publication of a bi-monthly newsletter, "The Coordinator."

Plans

In the coming year, the Community Resources Development staff will proceed with the implementation of the CBCCPs. It is expected that:

- The Metropolitan Detroit Community-Based Cancer Control Program will be operating at full implementation level with all subcontractor projects functioning.
- The New Mexico Cancer Control Program will inaugurate its first three subcontracts and within six months should be operating at full capacity.

Both of these programs will make minor changes as they submit their budgets and plans for year 2. They will receive merit peer review in January 1978.

- The Long Island Cancer Council will undergo the process of gearing up for implementation, including hiring of staff and negotiating subcontracts. It will be several months before the projects are operating because of the extensive ground-work necessary.
- Hawaii, Los Angeles and Rhode Island will submit their amended phase II plans. After review by Community Activities Review Committee and when approved, they will then negotiate contracts with DCCR and begin making the transition to phase II during late FY 1977 and early FY 1978.
- A comprehensive overall CBCCP evaluation plan will have been developed and put in place by DCCR staff, and adapted to local needs by local CBCCP staff. Preliminary evaluation data will provide insight into the process of a CBCCP.
- Community Resources Development Branch staff will continue to monitor the CBCCPs closely and provide technical assistance as appropriate.

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Program
2. Principal Investigator: Fiorindo A. Simeone, M.D.
Rhode Island Department of Health
75 Davis Street
Providence, Rhode Island 02908
3. Performing Organization: Rhode Island Department of Health
4. Contract Number: 55271
5. Starting Date: 1/27/77
6. Expiration Date: 6/26/77
7. Objective: The Rhode Island Department of Health will implement a state-wide integrated demonstration and education program directed toward groups at high risk from cancer of the lung, colon-rectum, breast, and uterine-cervix. It will also seek to bring cases found to a definitive diagnosis with referral to high quality treatment, followup and rehabilitation/continuing care where appropriate. The CBCCP is designed to test the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities, through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: The Rhode Island Department of Health is continuing with the planning of a CBCCP. When the planning tasks have been successfully completed, the Division of Cancer Control and Rehabilitation will negotiate an implementation contract.
9. Progress: From June 1975 to June 1976, the Rhode Island Department of Health completed the phase I tasks required for implementation. These include: Assembling demographic and epidemiologic information relevant to the community; selecting disease sites for emphasis; developing the organizational and community relationships necessary for broad involvement and support of the program; designing a coordinated and integrated plan for cancer control which addresses the gaps and needs uncovered during the planning process; and developing a surveillance system and data base adequate for evaluation. Since review by the Community Activities Review Committee, the Rhode Island Department of Health has been engaged in completing the phase I scope of work according to recommendations provided by Community Activities Review Committee. This has involved: Developing an evaluation plan; improving the management and coordinating mechanisms of the program; preparing milestone charts, by-laws and detailed budgets; enhancing internal coordination; expanding

the size and representativeness of the advisory board (for example, to include more consumers); refining the rehabilitation, prevention and professional education components of the program and hiring appropriate staff to fill in some of the gaps. It is expected that these tasks will be completed by early summer 1977. At that time a phase II implementation is expected to be started and then individual projects will be phased into operation.

Although there are distinct prevention (for lung) and detection (all sites) programs, the Rhode Island Department of Health has developed a program that revolves around Community Oncology Section (COS), multidisciplinary teams whose members will be concerned with all aspects of cancer care, including rehabilitation, home care and psychosocial support. Consumers will be hired as patient representatives.

When the planning period is completed, the Rhode Island Department of Health will be ready to implement a coordinated site/intervention plan for lung, colon-rectum, breast and uterine-cervix cancers. Professional and public education, assurance of continuity of care and the availability of rehabilitation and continuing care services will be important emphases of the community based cancer control program.

Evaluation Activity: Under the direction of core staff at the Rhode Island Department of Health.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$1.0 million

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Program
2. Principal Investigator: Richard K. C. Lee
Fred I. Gilbert
Cancer Center of Hawaii
1997 East-West Road
Honolulu, Hawaii 96822
3. Performing Organization: Cancer Center of Hawaii
4. Contract Number: 55267
5. Starting Date: 2/28/77
6. Expiration Date: 7/31/77
7. Objective: The Cancer Center of Hawaii will implement a statewide integrated demonstration and education program directed toward groups at high risk from cancers of the breast, lung, colon-rectum and uterine-cervix; and to bring cases found to a definitive diagnosis and referral to high quality treatment with followup and rehabilitation/continuing care where appropriate. The CBCCP is designed to test the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities, through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: The Cancer Center of Hawaii is continuing with the planning of a CBCCP. When the planning tasks have been successfully completed and reviewed, DCCR will negotiate an implementation contract.
9. Progress: From June 1975 to June 1976, the Cancer Center of Hawaii completed the phase I tasks required for implementation. These include: Assembling demographic and epidemiologic information relevant to the community; selecting 3-5 cancer sites for program emphasis; developing the organizational and community relationships necessary for broad involvement and support of the program; designing a coordinated and integrated plan for cancer control which addresses the gaps and needs uncovered during the planning process; and developing a surveillance system and data base adequate for evaluation. During this period, Hawaii has been engaged in completing the phase I scope of work according to the guidelines of the Community Activities Review Committee. This has involved: developing an active, representative Board and Committee structure; preparing bylaws and personnel procedures; improving the management and coordination mechanisms so that the CBCCP has an independent identity; developing an evaluation plan and revising the data

system so that it meets evaluation needs; identifying subcontractors; refining site/intervention plans; and expanding rehabilitation and continuing care to meet the needs of cancer patients. It is expected that these tasks will be completed by early summer 1977. At that time phase II implementation is expected to start and individual projects will be phased into operation.

When the planning period is completed, the Cancer Center of Hawaii will be ready to implement a coordinated site/intervention plan for breast, lung, colon-rectum, and uterine-cervix cancers. Professional and public education, assurance of continuity of care and the availability of rehabilitation and continuing care services will be important emphases of the CBCCP.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$1,200,000

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Program
2. Principal Investigator: Lester Breslow, M.D.
Robert J. McKenna, M.D.
Ruth Ann Pick, M.D.
Ralph R. Sachs, M.D.
Community Cancer Control/Los Angeles
712 South Curson Avenue
Los Angeles, California 90036
3. Performing Organization: Community Cancer Control/Los Angeles
(A non-profit corporation)
4. Contract Number: 55269
5. Starting Date: 1/30/77
6. Expiration Date: 6/30/77
7. Objective: Community Cancer Control/Los Angeles (CCC/LA) will implement a Community-Based Cancer Control Program for a target area of four million persons within the city of Los Angeles. The program is directed toward groups at high risk from cancers of the breast, uterine-cervix and lung. It will also seek to bring cases found to a definitive diagnosis with referral to high quality treatment with followup and rehabilitation/continuing care where appropriate. The CBCCP is designed to test the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: CCC/LA is continuing with the planning of a CBCCP. When the planning tasks have been successfully completed, DCCR will negotiate an implementation contract.
9. Progress: From June 1975 to June 1976, the CCC/LA completed the phase I tasks required for implementation. These include: Assembling demographic and epidemiologic information relevant to the community; selecting disease sites for emphasis; developing the organizational and community relationships necessary for broad involvement and support of the program; designing a coordinated and integrated plan for cancer control which addresses the gaps and needs uncovered during the planning process; and developing a surveillance system and data base adequate for evaluation. CCC/LA submitted its phase II plan in August 1976. The program was reviewed by the Community Activities Review Committee in October 1976. The outcome of a review was a decision that an additional six months of

planning would be appropriate, During the period, CCC/LA has been engaged in; developing a coordinated referral system for the target area; modifying the data system to meet CBCCP needs; refining the evaluation plan; revising bylaws and committees; improving the management structure; solidifying site/intervention programs; and securing firm subcontractor commitments for projects. It is expected that these tasks will be completed by early summer 1977. At that time a phase II implementation is expected to be initiated, and individual projects will be phased into operation.

When the planning period is completed, CCC/LA will be ready to implement a coordinated site/intervention plan for breast, lung and uterine-cervix cancers. Professional and public education, assurance of continuity of care and the availability of rehabilitation and continuing care services will be important emphases of the CBCCP.

Evaluation Activity: Under the direction of core staff at CCC/LA.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$1,101,000

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Program
2. Principal Investigator: Ray S. Crampton, M.D.
Long Island Cancer Council
535 Broad Hollow Road
Melville, New York 11746
3. Performing Organization: Long Island Cancer Council
(A non-profit corporation)
4. Contract Number: 55274
5. Starting Date: 4/1/77
6. Expiration Date: 4/1/82
7. Objective: The Long Island Cancer Council will implement a CBCCP in Suffolk and Nassau counties of Long Island. This is an integrated demonstration and education program in cancer control directed toward groups at high risk from cancers of the breast, prostate, colon-rectum, and uterine-cervix cancers. It will seek to bring cases found to a definitive diagnosis and referral to high quality treatment with followup and rehabilitation/continuing care where appropriate, based on the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: The Long Island Cancer Council has contracted to develop a coordinated approach to cancer control for four cancer sites. After an initial assessment of cancer control gaps and needs, the Council has developed site and intervention programs. For the first year of the program, there are several subcontractors developing site and intervention programs.
9. Progress: From June 1975 to June 1976, the Long Island Cancer Council completed the phase I tasks required for implementation. These include: Assembling demographic and epidemiologic information relevant to the community; selecting disease sites for emphasis; developing the organizational and community relationships necessary for broad involvement and support of the program; designing a coordinated and integrated plan for cancer control which addresses the gaps and needs uncovered during the planning process; and developing a surveillance system and data base adequate for evaluation. The plan was submitted in August, reviewed by the Community Activities Review Committee, site visited and approved in October 1976. Since that time, the Long Island Cancer Council has been

engaged in restructuring its Board committee and management structure; developing and evaluating plan; revising site and intervention plan; negotiating subcontracts; and phasing in both the data system and projects.

A brief survey of Long Island Cancer Council projects reveals:

Detection Projects:

ACS will subcontract to provide the public and professional education components of the program.

Brookhaven and North Shore Hospitals and the Nassau Department of Health will offer screening and education to high risk and medically indigent persons.

Adelphi School of Nursing is developing an oncology nursing curriculum.

Diagnosis and Treatment Projects:

The Long Island Cancer Council will sponsor tumor registrar seminars and coordinate treatment protocols.

Brookhaven Hospital is responsible for patient education.

Nassau County Medical Center will establish an ambulatory oncology center for the multidisciplinary care of cancer patients.

Rehabilitation and Continuing Care Projects:

Cancer Care Incorporated will offer casework counseling and home care to terminal cancer patients.

ACS will provide multi-site cancer counseling to assist cancer patients and their families in coping with the physiologic, psychologic, and socio-economic problems associated with cancer.

Community mental health clinics will subcontract to conduct special psychosocial problems for those coping with death and bereavement.

Evaluation Activity: Under the direction of experienced faculty at the State University of New York at Stony Brook.

10. Significance for Cancer Control Program: An opportunity to apply latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.

12. FY 1977 Funds: \$568,000

CONTRACT SUMMARY

1. Title: Metropolitan Detroit Cancer Control Program
2. Principal Investigator: Michael Brennan, M.D.
Michigan Cancer Foundation
110 East Warren Avenue
Detroit, Michigan 48201
3. Performing Organization: Michigan Cancer Foundation
4. Contract Number: 65252
5. Starting Date: 6/29/76
6. Expiration Date: 6/29/81
7. Objective: The Michigan Cancer Foundation will implement a community-based cancer control program for the metropolitan Detroit area directed toward groups at high risk from cancers of the breast, colon-rectum, uterine-cervix and head and neck. It will seek to bring cases found to a definitive diagnosis with referral to high quality treatment plus follow-up and rehabilitation/continuing care where appropriate. The Community-Based Cancer Control Program (CBCCP) is designed to test the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: The Michigan Cancer Foundation is to organize a coordinated community program for all relevant cancer interventions for the four selected disease sites. The Michigan Cancer Foundation is building linked networks of practitioners, voluntary organizations, and the public. The networks will deal with all aspects of cancer control from detection through continuing care.
9. Progress: June 1976 - February 1977 were start-up months in which program staff worked with community persons, both medical and lay, to formulate and refine realistic first year plans, negotiate subcontracts and develop an evaluation plan. The program was officially kicked off in February 1977 with a massive public information effort that included the participation of all the media and substantial participation from major advertising agencies. A specially produced booklet entitled, "A Better Chance to Live," was sent on request to over 40,000 households. The next year will see the phasing in of several innovative demonstration projects. For example:

Detection Projects: Cancer detection, with a strong educational component, will be conducted at three regional stations within the

Detroit SMSA at local American Cancer Society and Michigan Cancer Foundation offices.

The ACS has also subcontracted to offer public educational programs. The Michigan Cancer Foundation will conduct "Straight Talk" sessions--informal home sessions will allow women to talk openly about breast cancer and learn to perform the Breast Self Examination. The Oakland County Health Department is responsible for a breast cancer screening and education program that is already underway.

Diagnosis and Treatment Projects: This phase of the CBCCP will be based in a network of ten Clinical Demonstration Hospitals which treat about one-half of all cancer patients in metropolitan Detroit. Within the hospitals there are now tumor boards and Medical Advisory Panels--ten multidisciplinary committees: surgery, chemotherapy, radiology, pain control, pathology, breast cancer, uterine cancer, head and neck cancer and cervical cancer. The Medical Advisory Panels will be a focal point for development of protocols; the Clinical Demonstration Hospitals will provide a mechanism for the application of the latest cancer control technology to cancer management. Each Medical Advisory Panel will consist of at least one professional on staff at each of the ten Clinical Demonstration Hospitals and be chaired by a member of the faculty at Wayne State University.

Rehabilitation and Continuing Care Projects: Each Clinical Demonstration Hospital has a continuing care team which will coordinate home care as well as psychological and social assistance problems. In addition, each hospital will have counselors trained in the problems of cancer patients.

The Visiting Nurses Association and the Michigan Cancer Foundation will each conduct home care programs for cancer patients and their families. The American Cancer Society will implement self-help rehabilitation programs.

The next year will see all of these programs operating at full strength, staff in place, and the evaluation plan providing preliminary evaluation data.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$1,052,000

CONTRACT SUMMARY

1. Title: New Mexico Community-Based Cancer Control Program
2. Principal Investigator: Morton Kligerman, M.D.
New Mexico Cancer Research
and Treatment Center
900 Camino de Salud NE
Albuquerque, New Mexico 87131
3. Performing Organization: Cancer Research and Treatment Center
4. Contract Number: 65173
5. Starting Date: 6/23/76 6. Expiration Date: 6/23/81
7. Objective: The New Mexico Cancer Control Program will implement a state-wide integrated demonstration and education program in cancer control directed toward groups at high risk from cancers of the breast, uterine, cervix and colon-rectum in women. (The program will be broadened in years 2-5 to include lung and head and neck cancers for males and females.) It will also seek to bring cases found to a definitive diagnosis with referral to high quality treatment for followup and rehabilitation/continuing care where appropriate, based on the hypothesis that such a coordinated approach will result in better outcomes for cancer control technology to health practitioners and other relevant persons in the various communities through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: The NMCCP has contracted to develop a coordinated approach to cancer control in the State of New Mexico. After an initial assessment of New Mexico cancer control gaps and needs, the NMCCP has developed site related intervention programs. For the first year of the program, The Cancer Research and Treatment Center and three subcontractors have developed site and intervention programs.
9. Progress: Since June 1976, the NMCCP has been engaged in the complicated start-up activities associated with developing a massive cancer control effort which links The Cancer Research and Treatment Center, universities, public health professionals, labor and industry and the numerous community agencies involved in cancer control. Year 1 efforts have included: Hiring staff, working with committees to finalize plans, development and negotiation of subcontracts, design of an evaluation plan, and collection of baseline data. A brief survey of site and intervention programs reveals the following plans for spring 1977 through June 1978:

Detection Projects: In each activity women will be taught self-surveillance where relevant.

ACS has subcontracted to provide educational outreach teams to enroll high risk women in detection programs. ACS detection clinics will be held once per month at eight locations reaching 30 patients per day.

In another area of the state, the Southwest Health Care Coalition will conduct education and detection clinics.

The New Mexico Health Education Coalition will employ indigenous health education aides to implement education programs for rural Spanish and Indian persons.

The University of New Mexico will operate a special clinic to reach underserved, medically indigent persons.

Diagnosis and Treatment Projects: These interventions for all three sites will be under the guidance of the Cancer Research and Treatment Center which, in collaboration with appropriate professionals, will:

Develop cancer management guidelines

Promulgate American College of Surgeons certification for New Mexico hospitals

Operate a communications bank for information and referral

Implement statewide referral networks and continuing education and consultation programs.

Rehabilitation Projects:

ACS is providing psychosocial rehabilitation programs based on the self-help concept.

The Cancer Research and Treatment Center is developing a system whereby patients at the Cancer Research and Treatment Center will be evaluated for both psychological and physical rehabilitation. Where appropriate, services will be provided by a multidisciplinary team.

By late spring 1977, subcontracts were negotiated, paving the way for projects to begin operating.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.

12. FY 1977 Funds: \$1.0 million

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Program
2. Principal Investigator: James Walker, M.D.
UCONN Health Center
Department of Community Medicine
Room 04078
Farmington, Connecticut 06032
3. Performing Organization: Connecticut State Health Department
4. Contract Number: 55266
5. Starting Date: November 15, 1976
6. Expiration Date: June 29, 1977
7. Objectives: Connecticut State Health Department will implement a Community-Based Cancer Control Program within Connecticut. The program is directed toward groups at high risk from cancers of the breast, colon-rectum and lung. It will also seek to bring cases found to a definitive diagnosis with referral to high quality treatment with follow-up and rehabilitation/continuing care where appropriate. The CBCCP is designed to test the hypothesis that such a coordinated approach will result in better outcomes for cancer patients. The overall thrust of the CBCCP is the transfer of the latest cancer control technology to health practitioners and other relevant persons in the various communities, through the coordinated collaboration of the lay and medical communities. It is understood that while reducing morbidity and mortality is a long-term goal, short-term goals must of necessity focus on increasing public knowledge about cancer, changing behavior, detecting cancer at earlier stages, improving the practices of health professionals and providing more comprehensive and humane care to cancer patients.
8. Proposed Course: Connecticut is continuing with the planning of a Community-Based Cancer Control Program.
9. Progress: Connecticut requested a six month extension to complete its phase I plan. It was then awarded additional planning time as a result of the peer review process. Several of the planning tasks remain to be completed, for example, developing an integrated cancer control plan for each of the three disease sites selected.

When the planning period is completed, the Connecticut CBCCP will be ready to implement a statewide coordinated site/intervention plan for breast, colon-rectum and lung cancers. Professional and public education, assurance of continuity of care and the availability of rehabilitation and cancer control services will be important emphases of the Connecticut CBCCP.

10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.

11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$150,000

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Planning
2. Principal Investigator: Dr. Harold Rusch
701C Hospital
University Hospital
Madison, Wisconsin 53706
3. Performing Organization: Board of Regents
University of Wisconsin System
750 University Avenue
Madison, Wisconsin 53706
4. Contract Number: 55270
5. Starting Date: 6/25/75
6. Expiration Date: 12/31/76
7. Objective: Planning a community-based cancer control program will involve a multidisciplinary group of individuals, including citizens, medical practitioners, nurses, health educators, health care organizers and administrators, health planners, economists, epidemiologists, community organizers and voluntary organizations. Modalities include community involvement, organization, coordination of resources, facilities and personnel, public and professional education and intervention techniques. The plan will incorporate all the appropriate cancer control intervention knowledge and techniques pertinent to the epidemiologic characteristics, and socioeconomic characteristics of that community.
8. Proposed Courses:
 - Task I Develop profile of the specific community, including boundaries, cancer control activities, number and types of personnel, facilities and resources. Identify gaps/problems/needs not being met.
 - Task II Delineate the program to be implemented, including objectives, major courses of action and evaluation of same.
 - Task III Describe implementation factors (include Gantt and/or milestone charts) detailing who does what and when.
 - Task IV Specify program management (who is responsible for each program activity) in detail.
 - Task V Define plan for continuous surveillance, evaluation and reporting status and progress.
 - Task VI Identify related cancer and other health activities in the community and describe coordination mechanisms.

Task VII Provides financial planning for the implementation phase which requires 50/50 cost-sharing.

9. Progress: Following the completion of the planning period, the contractor submitted to DCCR a proposal which described how the community had proceeded with the completion of Tasks I through VII and identified the programs selected by them for implementation funding. These proposals were subjected to peer review by the Community Activities Review Committee which determined that this project was not ready for implementation at this time.
10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.
11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$ 9,000
TQ: \$15,000

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Planning
2. Principal Investigator: Dr. John Hartmann
Fred Hutchinson Cancer Research Center
1102 Columbia Street
Seattle, Washington 98104
3. Performing Organization: Fred Hutchinson Cancer Research Center
4. Contract Number: 55272
5. Starting Date: 6/6/75
6. Expiration Date: 12/31/76
7. Objective: Planning a community-based cancer control program will involve a multidisciplinary group of individuals, including citizens, and administrators, health planners, economists, epidemiologists, community organizers and voluntary organizations. Modalities include community involvement, organization, coordination of resources, facilities and personnel, public and professional education and intervention techniques. The plan will incorporate all the appropriate cancer control intervention knowledge and techniques pertinent to the epidemiologic characteristics, and socioeconomic characteristics of that community.
8. Proposed Courses:
 - Task I Develop profile of the specific community, including boundaries, cancer control activities, number and types of personnel, facilities, and resources. Identify gaps/problems/needs not being met.
 - Task II Delineate the program to be implemented, including objectives, major courses of action and evaluation of same.
 - Task III Describe implementation factors (include Gantt and/or milestone charts) detailing who does what and when.
 - Task IV Specify program management (who is responsible for each program activity) in detail.
 - Task V Define plan for continuous surveillance, evaluation and reporting status and progress.
 - Task VI Identify related cancer and other health activities in the community and describe coordination mechanisms.
 - Task VII Provide financial planning for the implementation phase which requires 50/50 cost-sharing.

9. Progress: Following the completion of the planning period, the contractor submitted to DCCR a proposal which described how the community had proceeded with the completion of Tasks I through VII and identified the programs selected by them for implementation funding. These proposals were subjected to peer review by the Community Activities Review Committee which determined that this project was not ready for implementation at this time.
10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.
11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: \$20,000

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Planning
2. Principal Investigator: Dr. W. Bradford Patterson
3. Performing Organization: The University of Rochester
Rochester, New York 14627
4. Contract Number: 55273
5. Starting Date: 6/30/75
6. Expiration Date: 12/31/76
7. Objective: Planning a community-based cancer control program will involve a multidisciplinary group of individuals, including citizens, medical practitioners, nurses, health educators, health care organizers and administrators, health planners, economists, epidemiologists, community organizers and voluntary organizations. Modalities include community involvement, organization, coordination of resources, facilities and personnel, public and professional education and intervention techniques. The plan will incorporate all the appropriate cancer control intervention knowledge and techniques pertinent to the epidemiologic characteristics, and socioeconomic characteristics of that community.
8. Proposed Courses:
 - Task I Develop profile of the specific community, including boundaries, cancer control activities, number and types of personnel, facilities, and resources. Identify gaps/problems/needs not being met.
 - Task II Delineate the program to be implemented, including objectives, major courses of action and evaluation of same.
 - Task III Describe implementation factors (include Gantt and/or milestone charts) detailing who does what and when.
 - Task IV Specify program management (who is responsible for each program activity) in detail.
 - Task V Define plan for continuous surveillance, evaluation and reporting status and progress.
 - Task VI Identify related cancer and other health activities in the community and describe coordination mechanisms.
 - Task VII Provide financial planning for the implementation phase which requires 50/50 cost-sharing.

9. Progress: Following the completion of the planning period, the contractor submitted to DCCR a proposal which described how the community had proceeded with the completion of Tasks I through VII and identified the programs selected by them for implementation funding. These proposals were subjected to peer review by the Community Activities Review Committee which determined that this project was not ready for implementation at this time.
10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.
11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: No 1977 Funds.

CONTRACT SUMMARY

1. Title: Community-Based Cancer Control Planning
2. Principal Investigator: Dr. Bernard Fisher
3. Performing Organization: University of Pittsburgh
3017 Cathedral of Learning
Pittsburgh, Pennsylvania 15260
4. Contract Number: 55268
5. Starting Date: 6/25/75
6. Expiration Date: 12/31/76
7. Objective: Planning a community-based cancer control program will involve a multidisciplinary group of individuals, including citizens, medical practitioners, nurses, health educators, health care organizers and administrators, health planners, economists, epidemiologists, community organizers and voluntary organizations. Modalities include community involvement, organization, coordination of resources, facilities and personnel, public and professional education and intervention techniques. The plan will incorporate all the appropriate cancer control intervention knowledge and techniques pertinent to the epidemiologic characteristics, and socioeconomic characteristics of that community.
8. Proposed Courses:
 - Task I Develop profile of the specific community, including boundaries, cancer control activities, number and types of personnel, facilities and resources. Identify gaps/problems/needs not being met.
 - Task II Delineate the program to be implemented, including objectives, major courses of action and evaluation of same.
 - Task III Describe implementation factors (include Gantt and/or milestone charts) detailing who does what and when.
 - Task IV Specify program management (who is responsible for each program activity) in detail.
 - Task V Define plan for continuous surveillance, evaluation and reporting status and progress.
 - Task VI Identify related cancer and other health activities in the community and describe coordination mechanisms.
 - Task VII Provide financial planning for the implementation phase which requires 50/50 cost-sharing.

9. Progress: Upon completion of the planning period, the contractor submitted a phase II implementation proposal but declined to apply for DCCR funding at this time.
10. Significance for Cancer Control Program: This is an opportunity to apply the latest cancer control technology in community settings in a coordinated manner, thereby improving the status of cancer patients.

National Cancer Program Objectives: During the course of the demonstration, all National Cancer Program approaches will be employed.
11. Project Officer: Ruby N. Isom, M.P.H., Ph.D.
12. FY 1977 Funds: No 1977 Funds.



COMMUNITY SPECIAL PROJECTS BRANCH

The Community Special Projects Branch has the responsibility of assisting NCI-recognized cancer centers in the development and implementation of cancer control community outreach programs. The approach that is being demonstrated by these centers in their outreach programs is based on the utilization of experienced institutions as the providers of cancer control education, consultation and assistance to medical institutions and practitioners.

Two program areas are utilized to fund the efforts of such experienced institutions in cancer control. They are: (1) Cancer Control Developmental Grants for Outreach Programs and (2) Cancer Control Communications Network Programs, funded through contracts. Public Law 92-218, Section 408 (a), as amended in 1974, mandates "...establishment of new centers for clinical research, training, and demonstration of advanced diagnostic and treatment methods relating to cancer." Basically these centers have been enabled through core, program and research grants funded by the Division of Cancer Research Resources and Centers. The House Report for the 1974 amendment points out that the research and demonstration centers "are expected to be geographically evenly distributed to allow for a significant impact on the quality of cancer care throughout the nation through effective demonstration and outreach programs." The cancer control outreach grants are utilized, in part to meet this provision of the National Cancer Act.

During the current year, the Division of Cancer Control and Rehabilitation (DCCR) has provided grant support to centers for planning, development and implementation of appropriate outreach efforts in their geographic zones. Grants cover all intervention areas and core support for the management of the cancer control component of the center. These cancer control development grants seek to transfer the latest research finding and the most up-to-date knowledge into professional practice as rapidly as possible in the areas served by the grantee centers. Outreach in each case is directed towards the needs of the professional health community and assumes a partnership between the cancer center and the outlying medical facilities, physicians and allied health professionals in achieving the most practical and effective detection, diagnosis, treatment and rehabilitation management presently available and economically attainable.

The center outreach programs comprise broad professional activities such as education, treatment protocol design, physician-network consultation, and joint pathology services, rather than the administration of specific interventions for the involved care-delivery system. The grant mechanism to support outreach planning and development by the centers continues to be used as a major thrust by DCCR in its cancer control programs.

In developing a cancer control program in the area of community outreach each center has needs which are unique to its own geographic area and overall program management problems. Support to program components under the developmental grants reflects such differences, and the developmental and

supplementary grant support is flexible in meeting specific needs as these fall within the overall National Cancer Control Program.

In the center outreach program, great emphasis is placed on the planning component, which requires a staff adequate to develop detailed knowledge of the population served, patient loads, different and unusual demographic factors and disease characteristics in the geographic area served. Scientific and administrative program content must be developed and capabilities for uncovering unknown needs and cancer control deficiencies must be provided.

It is essential to plan for the evaluation of control activities. Thus, a plan and a schedule for implementation of a center outreach program must be forthcoming for each developmental grant, addressing activities in prevention, early detection, diagnosis, treatment and rehabilitation, continuing care and professional education.

In the past three years, the center outreach program has moved steadily forward in varied areas of cancer control activities. Model oncology training programs for community physicians have been planned and implemented. Several centers have taken the leadership in dosimetry programs to make the knowledge and techniques of radiation therapy at the center available to the outlying physicians. A wide range of support for community hospitals has been developed, including multidisciplinary, multi-institutional consultative services for cancer diagnosis and treatment, paraprofessional training programs, pathology services and tumor registrar education. In Massachusetts, the Sidney Farber Cancer Center has developed cancer control systems to serve the distant areas of Springfield, Massachusetts and East Maine. These systems will serve as demonstration models for other areas in the United States that are remote from a comprehensive cancer center. The Fred Hutchinson Cancer Center is continuing the education of nurses through its Gynecorp Project. Special emphasis is placed upon the instruction of nurses to teach breast self-examination to patients and to test for uterine and cervical cancer.

The continuing development of center outreach programs revolves around: (1) the means for each center to determine the geographic extent of its outreach activities; (2) the development of strong cooperative ties with the professional institutions and organizations in their areas; and (3) the making of cancer control outreach needs compatible with available center resources.

Communication is an essential component of the Center Outreach Program. The DCCR provides funding support for the development of cancer information systems serving both health professionals and the general public. Seventeen centers have cancer control communications project contracts. The DCCR aim for comprehensive cancer center communication contracts is to meet the specific cancer information needs of the areas served by individual centers.

The programs are intended to improve the ability of the comprehensive cancer centers to provide the public and health professionals with prompt access to the latest and most accurate cancer control knowledge. Through a variety of communication channels, the centers will rapidly disseminate this knowledge

as it becomes available from the research and educational activities of institutions and organizations concerned with cancer.

Cancer information offices provide a focal point for coordination and cooperation with regional and community, public and professional cancer education control programs currently in progress. Such offices also provide support for dealing with groups such as news media, community organizations, and other health-related agencies.

Since February 1976, when the cancer information service system was inaugurated in the Fort Myers, Florida area, the system has grown to include 16 of the 17 contracted comprehensive cancer centers and has responded to nearly 60,000 inquiries from the public and health professionals. The cancer information service programs are available to more than 105 million Americans in all or parts of 22 states.

Two additional communication programs have been made available through contracts. The DIAL ACCESS program at the M.D. Anderson Hospital in Houston, Texas consists of a library of approximately 300 taped messages concerning the detection, diagnosis, and treatment of cancer and the continuing care of cancer patients. These are intended primarily for the use of physicians and dentists and have been utilized principally in the 17 states comprising the Southern Medical Association Region. National coverage is planned. The CAN-DIAL program, located at the Roswell Park Memorial Institute, consists of a bank of taped messages for use by the public. Approximately 36 messages are available for listening by dialing the CAN-DIAL number. Additional tapes are in preparation and services are to be made available around the clock.

Plans

In the coming fiscal year, emphasis will continue to be placed upon the following:

1. Developing with the American Association of Cancer Institutions, under contract support, composite profiles of cancer control activities in cancer centers.
2. Assisting members of center staffs to match the outreach needs of individual centers with the resources available to them.
3. Helping centers to establish more effective outreach linkages and cooperative ties with professional organizations and cancer related agencies and institutions within their service areas.
4. Assisting grantees to identify more appropriate evaluation methodologies and procedures in their assessment of developmental grants.
5. Providing assistance to center staffs to help increase the effectiveness of outreach programs and identify new areas of outreach need for which new or expanded programs should be explored.

6. Initiating outreach program consultation to new comprehensive cancer centers and newly NCI recognized non-comprehensive cancer centers.
7. Continuing the implementation of the remaining components of the cancer communication system in comprehensive cancer centers with implementation to be completed by the end of FY 1977.
8. Encouraging centers to work with cancer related professional and volunteer agencies and institutions in the development of cancer control programs.
9. Urging centers in their initiation of outreach grant programs to utilize cancer control projects that have demonstrated effectiveness in other branches of the DCCR.

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. W. H. Shingleton
Duke University Medical Center
Comprehensive Cancer Center
Durham, North Carolina 27710
3. Performing Organization: Duke University Medical Center
4. Grant Number: R18 CA 16400
5. Starting Date: 6/1/74
6. Expiration Date: 5/31/77
7. Objective: (1) To mobilize a broad spectrum of community resources into integrated regional networks to provide comprehensive cancer services for various types of cancer at specific intervention points and,
(2) Increase the pool of available key resources to outlying communities by means of coordinating and efficiently utilizing trained professionals and presently available facilities.
8. Proposed Course: This outreach program is designed to improve the application and distribution of existing procedures and techniques for general use in the population related to cancer prevention and diagnosis. Studies of cancer in the general region and educational programs, both lay and professional, will be an important part of this activity. A Cancer Control Planning Committee will be appointed. A Radiation Therapy Outreach Program to upgrade the radiation therapy in the state has been developed. Trophoblastic center will continue to provide assistance to community physicians who care for patients suspected or found to have trophoblastic disease.
9. Progress: The major thrust has been oncology continuing education programs for physicians and nurses. Regional planning has taken place.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: University of Chicago Cancer Control Center
2. Principal Investigator: Dr. John Ultmann
University of Chicago Cancer Research Center
Chicago Comprehensive Cancer Center
Chicago, Illinois 60637
3. Performing Organization: University of Chicago
4. Grant Number: R18 CA 16401
5. Starting Date: 6/1/74
6. Expiration Date: 11/30/77
7. Objective: The objectives of this program are: (1) Expansion of education in diagnosis and treatment of cancer by the establishment of an oncology nurse education program; (2) Establishment of educational programs for community physician education; (3) Expansion of registry facility; (4) Establishment of a head and neck reconstruction-rehabilitation program and (5) Creation of an office to coordinate and evaluate these programs and plan new programs.
8. Proposed Course: The Center is developing a base for cancer control in epidemiology and community health. Needs of each community are being assessed. The present course of the Center is to develop programs in nursing oncology, psycho-social problems of cancer, gynecologic cancer detection, a clinical data center (tumor registry), early detection of GI cancer and a maxillofacial rehabilitation program.
9. Progress: The UCCC has developed and implemented a regional survey of the demographic characteristics, cancer detection units, therapy units, and rehabilitation resources. The outreach program has been active in continuing education programs for physicians and allied health personnel in oncology. Clinical data collection with a few of the Chicago area hospitals has been initiated. This involves an "on-line" data collection utilizing the Biological Science Computation Center. UCCC is currently working with the George and Anna Poetes Cancer Prevention Center in a study of examinees' attitudes towards cancer screening and treatment.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$95,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. Guy F. Robbins
Memorial Sloan-Kettering Hospital for
Cancer & Allied Diseases
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied
Diseases
4. Grant Number: R18 CA 16402
5. Starting Date: 6/15/74
6. Expiration Date: 5/31/79
7. Objective: The major objective of the program will be on the implementation of a model referral system involving a network of primary care hospitals cooperating closely with the comprehensive cancer center in realizing in two ways the optimal early diagnosis, referral and management of cancer patients in the primary care situation.
8. Proposed Course: This grant includes: (1) model referral system for cancer therapy; (2) medical education and communication; and (3) radiation dosimetry center. This program will facilitate the early diagnosis, referral and management of cancer patients in the primary care situation. For the patients who do not dictate direct access to the center, the system provides the physician with the most up-to-date measures for the early diagnosis, treatment, and rehabilitation of the patient.
9. Progress: Intramural and Extramural physician/dentist education has been the main thrust. This has involved community and institution participants. Staff members have attended Community Hospital Tumor Clinics (150 sessions). A reference manual has been developed and distributed which serves as a guideline to health professionals who wish consultations, referrals and professional education. Planning assistance has been given to community hospitals in the field of tumor registries.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$507,894

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. William B. Hutchinson
Fred Hutchinson Cancer Research Center
Seattle, Washington 98104
3. Performing Organization: Fred Hutchinson Cancer Research Center
4. Grant Number: R18 CA 16404
5. Starting Date: 6/30/74 6. Expiration Date: 11/30/79
7. Objective: To develop support programs for cancer control by utilizing community outreach projects.
8. Proposed Course: The Center will serve as an institutional and programmatic focus for extramural activities in cancer prevention, detection, diagnosis, treatment, rehabilitation and education for both professional and lay personnel. These activities will serve as an initial data base for descriptive and analytical approaches to the management of the cancer patient. Activities in this project are:
(a) social/epidemiology of cancer care; (b) biostatistics/epidemiology;
(c) gynecorps; (d) breast cancer detection and education program;
(e) library support services; (f) oncology self-training units; and
(g) extramural counseling.
9. Progress: Private practitioners from communities act as advisors to the Center for outreach programs. There is a public education program in breast cancer conducted through the Virginia Mason Hospital Breast Cancer Detection Demonstration Program. Audio-visual tapes have been developed for medical students, residents, post-doctoral trainees, and physicians.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$474,707

GRANT SUMMARY

1. Title: Development of a Regional Cancer Control Program
2. Principal Investigator: Dr. Harold P. Rusch
Wisconsin Comprehensive Cancer Center
Madison, Wisconsin 53706
3. Performing Organization: University of Wisconsin
4. Grant Number: R18 CA 16405
5. Starting Date: 6/1/74 6. Expiration Date: 12/31/79
7. Objective: To plan an outreach program designed to improve the application and distribution of existing procedures and techniques for general use in the population related to cancer prevention, diagnosis, treatment and rehabilitation of cancer patients. To conduct educational programs.
8. Proposed Course: The Wisconsin Clinical Cancer Center will develop a statewide cancer control program designed to: (1) engage health care professionals in efforts to detect cancer earlier; (2) develop a regional network of affiliated centers providing excellent diagnosis and treatment of cancer; (3) conduct cooperative projects in cancer detection, diagnosis, therapy and rehabilitation; (4) serve regional units with central data management resources; (5) endocrine receptors--to develop criteria for the assay of estrogen receptors in breast cancer specimens; and (6) colposcopy training program.
9. Progress: A program, guided by this center, has been planned and developed and implemented. The planning for the regional component has been expanded to include networks for: (1) colposcopy; (2) large bowel task force; and (3) rehabilitation. Additional involvement in control activities has included endocrine studies in the Milwaukee Breast Screening Project and involving a biostatistics unit with 40 consultation projects. The public education program has resulted in 30 tapes on "Steps in the Conquest of Cancer" being prepared for radio and publishing a joint interagency newsletter with state agencies.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$507,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. Alfred Frechette
Sidney Farber Cancer Center
Boston, Massachusetts 02115
3. Performing Organization: Children's Cancer Research Foundation, Inc.
4. Grant Number: R18 CA 16408
5. Starting Date: 6/1/74
6. Expiration Date: 5/31/80
7. Objective: To improve the care of the cancer patient through more effective organization of the cancer health delivery system in order to make all modalities and all aspects of cancer control available to the cancer patient, regardless of point of entry into the system. To promote outreach activities and to increase the availability of resources by developing formal affiliations between hospitals and community health agencies.
8. Proposed Course: Four major cancer medical centers have formed a network in Boston (Tufts--New England Medical Center, Massachusetts General Hospital, Boston University Cancer Research Center, and the Sidney Farber Cancer Institute). The Cancer Coordinating Committee of this group serves as an information exchange and collaboration point. The activities of the committee include community planning, community service and evaluation.
9. Progress: Tufts--New England Medical Center has established a local regional, advisory committee. Other activities include the training of physicians in radiotherapy and gynecologic oncology. They also support education programs in community hospitals and provide consultation to individual physicians.

Massachusetts General Hospital supports seminars on cancer topics, tumor board conferences and provides professional consultation.

Boston University Cancer Research Center sponsors programs in education for community hospitals and special programs on tumor registries.

Sidney Farber Cancer Center coordinates the hospital/medical centers networks. Regional and planning assistance in Springfield, Mass. has developed a local cancer network utilizing all available resources.

The outreach core staff is currently working with the Eastern Maine Medical Center.

10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$1,396,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. John Durant
University of Alabama Cancer Center
Birmingham, Alabama 35294
3. Performing Organization: University of Alabama in Birmingham
4. Grant Number: R18 CA 16409
5. Starting Date: 6/1/74
6. Expiration Date: 11/30/77
7. Objective: The objectives of this program are: (a) to identify as many existing and potential mechanisms by which the center can aid the community in its approach to the problem of cancer; (b) expand and support present control activities in the State of Alabama; (c) develop a means of evaluating the Center's total impact on cancer care in the area of the Center's influence; (d) develop programs for improving cancer detection and prevention; (3) to secure paramedical personnel to accomplish these goals.
8. Proposed Course: This program has emphasized the training of gynecologic nurses, establishment of colposcopy clinics, regional radiation planning services, tumor conferences, extension of chemotherapy programs, MIST, and radiation dosimetry programs.
9. Progress: Fifteen gynecological nurses/directors are trained per year. Six colposcopy clinics have been assisted. A guide on cancer for student nurses in chemotherapy agents has been developed. There has been a continuation of tumor conferences in 4 locations through the state. An increase in the number of program inquiries has been made through MIST.
10. Significance for Cancer Control: To evaluate methods, techniques, and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$273,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. H. James Wallace
Roswell Park Memorial Institute
Buffalo, New York 14263
3. Performing Organization: Roswell Park Memorial Institute
4. Grant Number: R18 CA 16411
5. Starting Date: 6/1/75
6. Expiration Date: 5/31/78
7. Objective: To mobilize a broad spectrum of community resources into integrated regional networks to provide comprehensive cancer services for various types of cancer at specific intervention points. To increase the pool of available key resources to outlying communities by means of coordinating and efficiently utilizing trained professionals and presently available facilities.
8. Proposed Course: There are three specific outreach projects: (1) cancer control information system; (2) continuing education program in oncology for physicians and dentists; (3) visiting cancer teams for local community hospitals.
9. Progress: The Cancer Control Information System component of the Lake Area Tumor Registry has 22 participating hospitals. Programs for local physicians and dentists include a series of name lecturers, two-day introductory seminars in relation to the name lecture, two-day intensive didactic courses in a special area of oncology and an eight-week intensive course in medical oncology.

Expansion of this program to seven or eight communities is planned to deal with problems in cancer management as identified by local physicians or through registration, an indispensable way of coordinating community resources.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$286,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. Joseph Painter
University of Texas
Houston, Texas 77025
3. Performing Organization: University of Texas System Cancer Center
4. Grant Number: R18 CA 16413
5. Starting Date: 6/30/74 6. Expiration Date: 5/31/78
7. Objective: It is proposed to develop with the M. D. Anderson Hospital and Tumor Institute, in cooperation with the University Health Science Center, and Texas State Department of Health, a cancer control program in selected public health regions. Subcommittees of the Oncology Council will develop programs in education and training; screening and detecting epidemiology and prevention; and for cooperative treatment protocols. To develop in three Texas public health regions, a cancer detection clinic where prospective epidemiological studies can be conducted and designed to identify individuals at risk for the development of selected cancers.
8. Proposed Course: There are six components to this grant. They are: (1) the cancer control advisory committee; (2) the cancer control program for nurses; (3) cancer screening clinics--Houston; (4) continuing education program in Texas, Public Health Region #7; (5) cancer education network--radiation centers; (6) uniform data base for development of cancer control program for family practitioners; (6) pilot course in prophylactic dental care.
9. Progress: The cancer control advisory committee convenes on a quarterly basis and advises on services for rural and medically underserved populations. It also strengthens local manpower utilization. Identifies needs.

The cancer control program for nurses features an updating of oncology nursing knowledge. Nurses participate in a maximum of 10 three-week instructional sessions.

Cancer screening clinics of Houston employ many of the nurse trainees from the cancer control nursing program listed above.

Continuing education programs have included 10 small rural hospitals in Region #7 for preparation in cancer management. Ongoing public education programs have been utilized from the Tyler, Texas Asbestos Workers Program and anti-smoking programs.

In the educational network effort, specialized educational programs deal with problems in cancer diagnosis and management which relate to specific cancer subjects, i.e., tumor boards and treatment planning conferences. In addition, two-day programs for primary care physicians are also conducted.

The uniform data base develops the use of a common cancer registry and data management system. Two basic programs have been developed in the family practice area. There is an intra-institutional program which features two or four-week elective program courses at M. D. Anderson. Extra one-hour institutional programs are offered at community hospitals in the state.

The pilot course in prophylactic dental care includes a pilot course with the cooperation of the Association of Community Radiation Therapy Centers. A curriculum has been designed to reflect the needs of each center. Basic in-house evaluation and review of the cancer control program is being conducted through the Office of Extramural Programs.

10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$254,000

GRANT SUMMARY

1. Title: Regional Activities - LAC/USC Cancer Center
2. Principal Investigator: Dr. Robert McKenna
University of Southern California
LAC/USC Cancer Center
Los Angeles, California 90031
3. Performing Organization: University of Southern California
4. Grant Number: R18 CA 16419
5. Starting Date: 6/1/74 6. Expiration Date: 5/31/79
7. Objective: The objectives of this proposal are to devise systems and programs to assess the impact of the programmatic activities of the LAC-USC Cancer Center on various parameters which include the morbidity and mortality from cancer on the populace served in this region. Base-line data will be developed to describe, quantitate and evaluate the cancer activities, resources and capabilities of the region. These data will provide identification of unmet needs and direction of endeavor for a regional program which will have a beneficial impact, a means of evaluating the impact of the programs, and lead to the introduction of pilot model cancer control programs which are amenable to impact assessment.
8. Proposed Course: This program includes core support for cancer control: (1) community registry development program, (2) radiotherapy support system, (3) bone and soft part sarcoma, (4) consultant services, (5) demonstration enterostomal clinic, (6) model radiation cancer management program, and (7) radiation therapy technologist program.
9. Progress: There is considerable planning assistance within the core support program. There are 12 traveling consultants within the oncology consultant program. A nursing oncology education program has been established as well as a Speakers Bureau. By-laws have been developed to provide an organizational framework for a cancer management network of community hospitals. Membership application forms have been developed for the member hospitals.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$855,000

GRANT SUMMARY

1. Title: Cancer Control Development Grant
2. Principal Investigator: Dr. Phillip Waalkes
The Johns Hopkins University Cancer Center
Baltimore, Maryland 21205
3. Performing Organization: The Johns Hopkins University
4. Grant Number: R18 CA 17448
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/78
7. Objective: To mobilize a broad spectrum of community resources into integrated networks to provide comprehensive cancer services for various types of cancer at specific intervention points.

To increase the pool of available key resources to outlying communities by means of coordinating and efficiently utilizing trained professionals and presently available facilities.

8. Proposed Course: This developmental project has 3 ongoing major components: 1) an Educational Program for Physicians; 2) Psycho-Social Rehab.; and 3) core planning and evaluation.
9. Progress: In the Education Program for Physicians instruction is provided for the pre and post doctoral level in a structured curriculum, continuing education courses for physicians, and specialized instruction in clinical oncology for nurses.

The Psycho-Social Rehabilitation program features a team approach through the utilization of a psychiatrist, research psychologist, psychiatric nurse specialist, nurse practitioner, psychiatric counselor, and research psychometricians. Advanced educational services are provided for professionals.

The Planning and Evaluation portion of this grant utilizes subcontractor (David Herring Associates) who has obtained information regarding community hospitals, equipment, specialized social services, and provisions for cancer patients. Community Program Advisory Committee has conferred with subcontractor and is using information obtained by the subcontractor.

10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$506,000

GRANT SUMMARY

1. Title: Cancer Control Outreach Program Development Grant
2. Principal Investigator: Dr. John E. Healey
Miami Comprehensive Cancer Center
Miami, Florida 33152
3. Performing Organization: University of Miami
4. Grant Number: R18 CA 17910
5. Starting Date: 6/1/75
6. Expiration Date: 5/31/77
7. Objectives: The purpose of this project is to conduct a systematic, comprehensive and coordinated planning effort in cancer control for the state of Florida under the auspices of the Cancer Control Program arm of the Comprehensive Cancer Center of Greater Miami. This effort is aimed at the establishment of a statewide cancer control program which reflects the existing needs of the cancer patient and general population in the intervention areas of cancer.
8. Proposed Course: The proposed course is to:
 - a. Identify and specify the existing cancer control activities and facilities in the state of Florida.
 - b. Identify existing resources potentially available and needed for intervention purposes.
 - c. Review national cancer research findings in the light of potential local demonstration.
 - d. Formulate and integrate the above, based on an evaluation process, into a priority-oriented set of implementation projects.
9. Progress: During the past two years, the Florida Comprehensive Cancer Center has:
 - a. Formed Section Committees to take inventory of all cancer control activities on the campus and identified needs.
 - b. Established communications with key organizations, i.e., American Cancer Society; other health care agencies.
 - c. Established a Cancer Control Consumer Council which reviews and advises the Division of Cancer Control.
 - d. Established a Florida Cancer Control Advisory Board.

- e. Established nine area Cancer Control Committees which assess cancer control needs at the local level.
 - f. Developed a survey design and instruments and implemented a statewide survey.
 - g. Published Resource Directories.
 - h. Reviewed and analyzed existing cancer registry programs.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$87,000

GRANT SUMMARY

1. Title: Cancer Center Community Outreach Developmental Grant
2. Principal Investigator: Dr. Jack E. White
Vincent Lombardi Comprehensive Cancer Center
Washington, D. C. 20059
3. Performing Organization: Howard University
4. Grant Number: R18 CA 18510-A1
5. Starting Date: 2/1/77 6. Expiration Date: 1/31/80
7. Objectives: The objectives are:
 - a. Establish a Cancer Coordinating Council with an Advisory Board.
 - b. Assess the current and future cancer needs for the community.
 - c. Utilize the planning process to coordinate the fulfillment of these needs, minimizing duplication and maximizing cooperation.
8. Proposed Course: Phase 1 - Devoted largely to recruiting and organizing the Cancer Council and Advisory Board. Phase 2 - A planning phase devoted to assessing the community needs and resources and developing strategies for meeting the needs. Phase 3 - Program implementation with internal provisions for evaluation, feedback and second-round planning.
9. Progress: This project has just started.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$318,000

GRANT SUMMARY

1. Title: Cancer Control Outreach Program at Fox Chase
2. Principal Investigator: Dr. M. Donaldson
Institute for Cancer Research
Fox Chase, Pennsylvania 19111
3. Performing Institution: Institute for Cancer Research
4. Grant Number: R18 CA 18993
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/79
7. Objectives: To expand the current cancer control outreach activities and to initiate new projects growing out of cancer research.
8. Proposed Course: This grant will establish:
 - a. Cancer Control Core Unit.
 - b. Outreach Network Operations - health professionals who visit hospitals and assist with their cancer management programs.
 - c. Education for Health Professionals - general continuing education and training of personnel for the CANSCREEN program.
 - d. CANSCREEN - Identification of subpopulations at high risk in conjunction with the Strang Clinic. Prevention education and screening.
 - e. Epidemiology-Statistics - assists core staff with planning and evaluation.
 - f. Health Education Programs - patient education.
9. Progress: On August 1, 1976, Dr. M. Donaldson was appointed Vice-President for Cancer Control. Seven hospitals connected with the breast cancer network program have signed agreements to affiliate with FCCC in multi-site cancer control activities. Two other hospitals have joined the network and discussions with three other hospitals are being considered. Several continuing education programs for dentists, nurses and physicians have been planned and completed. CANSCREEN has screened 434 persons in the past year and is in the process of developing a data entry and management system.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$778,000

GRANT SUMMARY

1. Title: Development of Coordinated Cancer Program
2. Principal Investigator: Dr. Samuel G. Taylor
Illinois Cancer Council
Chicago, Illinois 60633
3. Performing Organization: Illinois Cancer Council
4. Grant Number: R18 CA 20071
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/79
7. Objective: To provide a regionalized system of planning, administrative, statistical, evaluative and service activities for the control of cancer in identified populations.
8. Proposed Course: The proposed course is to:
 - a. Form a cancer control core unit.
 - b. Conduct an exploratory study of utilization of rehabilitation services - an attempt to broaden the interest in rehabilitation and to serve as a teaching mechanism; and also to lead to cooperative rehabilitation activities among the hospitals of the council.
 - c. Plan a collaborative GYN/OBS Oncology Program - to establish GYN/OBS capabilities on the core staff of the ICC.
 - d. Conduct a Pediatric Oncology Program - to provide a nurse educator and social worker for the core staff.
9. Progress: This program has just started.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$246,000

GRANT SUMMARY

1. Title: Cancer Answers and Rights Information System
2. Principal Investigator: Dr. Robert Jessee
Virginia Commonwealth University
Medical College of Virginia
Department of Preventive Medicine
Richmond, Virginia 23298
3. Performing Organization: Virginia Commonwealth University
4. Grant Number: R18 CA 17797
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/77
7. Objective: To develop audio tape "Answers" to public phone inquiries on cancer control, so that the public's right to know the latest comprehensive knowledge can be met.
8. Proposed Course: To plan, develop and implement a demonstration model which provides a semi-automated telephone information retrieval system to answer phone calls and play taped messages. Messages providing cancer facts and identifying resources for diagnosis and treatment will be made available to the general public through telephone request by the concerned individual. Messages pertaining to cancer diagnosis, prognosis, therapy and other information related to the "Patient's Bill of Rights" will be prescribed for the patient by the attending physician.
9. Progress: During the first year of operation, plans for the system were completed and implementation began. Twenty tapes were developed with basic cancer information. The Grant planned, developed and demonstrated a model system to provide the concerned individual with cancer facts, diagnostic and treatment resource data, information rightfully due the cancer patient and stipulated in the "Patient's Bill of Rights."
10. Significance for Cancer Control Program: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: Exploratory Studies in Cancer Research
2. Principal Investigator: Dr. Robert Greenlaw
Marshfield Medical Foundation
Marshfield, Wisconsin 54449
3. Performing Organization: Marshfield Medical Foundation
4. Grant Number: R18-CA-18728
5. Starting Date: 9/30/76 6. Expiration Date: 8/31/77
7. Objectives: The objectives are:
 - a. To develop a long-range plan for the evolving cancer program.
 - b. To develop a community outreach program for coordinated comprehensive cancer services.
 - c. To develop epidemiological and other studies which will result in greater knowledge of cancer as a disease entity and lead to improved care for the cancer patient.

8. Proposed Course:

Phase I - Focus on planning.

- a. Creation of a task force to review programs in clinical areas, research, education and community outreach.
- b. Hire a consulting firm (subcontract) to reproduce and analyze data which will impinge on the planning process, inventory facilities and equipment and design a data base system to be utilized for information and program evaluation.
- c. Assess cancer needs of the area.

Phase II - Focus on the steps required to implement the developed plan.

- a. Evaluate and recommend changes at the Marshfield Medical Center.
- b. Identify the most appropriate mechanisms for financing the programs.
- c. Develop and finalize a long-range plan to implement all needed programs.

9. Progress: This program has just started.
10. Significance for Cancer Control: To evaluate methods, techniques, and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: A Tumor Control Center Program
2. Principal Investigator: Dr. Leslie Whitney
Wilmington Medical Center
Wilmington, Delaware 19899
3. Performing Organization: Wilmington Medical Center
4. Grant Number: R18 CA 18940
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/78
7. Objectives: To expand the Delaware Cancer Network by introducing more disciplines to the health care team.
8. Proposed Course: Appointment of a cancer coordinator of the six participating hospitals is the first step. Each cancer coordinator has the responsibility for establishing a cancer committee in the hospital, develop monthly tumor clinics and conferences, inviting local physicians to present cases, directing professional education for physicians and allied health personnel and provide general supervision of the tumor registry clerk.
9. Progress: This project has just started.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$202,000

GRANT SUMMARY

1. Title: Exploratory Study in Cancer Inreach Network
2. Principal Investigator: Dr. David M. Goldenberg
Ephraim McDowell Community Cancer Network, Inc.
Lexington, Kentucky 40506
3. Performing Organization: University of Kentucky
4. Grant Number: R18 CA 19470
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/77
7. Objective: To develop a Cancer Control "Inreach" program for regions/locations within the service area of the Ephraim McDowell Cancer Research and Treatment Network.
8. Proposed Course: The proposed course is to:
 - a. Develop an "inreach" originating from within the existing network localities where local needs and prerogatives are recognized.
 - b. Establish local and area-wide coordinating councils.
 - c. To match "inreach" requests with outreach capabilities for optimal resource utilization.
 - d. Develop a planned sequence program to meet local needs with the mutual assistance of the network and communities.
9. Progress: The network is now in operation. Plans for program development have been partially completed, and a new grant application has been received by DCCR for implementation.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

GRANT SUMMARY

1. Title: School Problems of Children with Malignant Neoplasma
2. Principal Investigator: Dr. W. J. Zwartjes
The Children's Hospital
Denver, Colorado 80218
3. Performing Organization: The Children's Hospital
4. Grant Number: R18 CA 19581
5. Starting Date: 6/30/76 6. Expiration Date: 6/29/79
7. Objectives: The objectives are:
 - a. To document the nature and quantity of school-related problems experienced by children with cancer and the effect these problems have on their successful education.
 - b. To demonstrate that active intervention on the part of the medical staff can decrease the number and significance of school-related problems experienced by the patient, the teacher and classmates.
8. Proposed Course: The proposed course is to conduct:
 - a. Retrospective study of 268+ patients treated at the Regional Pediatric Oncology Center which will delineate the school-related problems which they experienced. Personal interviews and questionnaires will be utilized.
 - b. A random study of all new patients over the 3 year grant period, comparing maximal versus minimal active medical intervention. The research group will receive preventative counseling, while the control group will only receive crisis intervention.
9. Progress: This grant has only just started.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. Carl A. Larson
12. FY 1977 Funds: \$107,000

GRANT SUMMARY

1. Title: Exploratory Research in a Community
2. Principal Investigator: Dr. N. M. Christensen
Humboldt-Del Norte Medical Society
Eureka, California 95501
3. Performing Organization: Humboldt-Del Norte Medical Society
4. Grant Number: R18 CA 20159
5. Starting Date: 4/1/77 6. Expiration Date: 3/31/78
7. Objective: To conduct a research study into the mechanisms and organization required to develop a community cancer center for sparsely populated rural Northwestern California counties.
8. Proposed Course: Two subcontracts are being let - one to study cancer center planning and operation and the second to study facilities and equipment in the region.
9. Progress: This program just started.
10. Significance for Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$26,940

GRANT SUMMARY

1. Title: A Concept for Optimal Cancer Care in Oregon
2. Principal Investigator: Dr. A. C. Hutchinson
Medical Research Foundation of Oregon
Portland, Oregon 97201
3. Performing Organization: Oregon Comprehensive Cancer Center
4. Grant Number: R18 CA 21267
5. Starting Date: 4/1/77 6. Expiration Date: 3/31/80
7. Objective: To continue the development of the Oregon Comprehensive Cancer Program's organizational concept for a statewide cooperative, multi-institutional cancer system in Oregon.
8. Proposed Course: Activities are:
 - a. Core - program administration under the Board of Directors. Will provide network communication and evaluation.
 - b. Professional Education - assessment of site specific educational needs by the task force mechanism.
 - c. Oncology Unit - establishment of oncology units within the 15 network hospitals.
 - d. Nurse Oncologists - training of nurse oncologists.
 - e. Data Management - continuation and expansion of existing data collection procedures.
 - f. Task Force Program - continued efforts to direct and coordinate activities within the network.
9. Progress: This program just started.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$213,000

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. Edwin Mirand
Roswell Park Memorial Institute
Buffalo, New York 14203
3. Performing Organization: Roswell Park Memorial Institute
4. Contract Number: 55174
5. Starting Date: 5/1/75
6. Expiration Date: 4/30/78
7. Objective: To serve as a focal point within the center for rapid and easy access to information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for public and professional inquiries via telephone. The contractor will perform all activities leading to the establishment and maintenance of a quality service involving the use of professional and lay volunteers and a public awareness promotional effort designed to alert the public and health professionals to the availability of the service. Volunteers will be adequately trained to handle a range of questions about cancer.
9. Progress: The Communications Office has been established and is fully operational, handling an average of 425 public and professional telephone inquiries a month. In addition, the office serves as the public affairs component of the center and performs a wide variety of communications functions including managing the public outreach program among school-age children. Also, the office assists the professional education activity of the center by promoting continuing medical education activities sponsored by the center. The office also cooperates closely with the American Cancer Society and other cancer-concerned organizations in the area on joint projects, such as thyroid cancer alert program and a prostate cancer education project.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1, C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$133,000

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. Lewis Thomas
Memorial Hospital for Cancer and
Allied Diseases
1275 York Avenue
New York, New York 10021
3. Performing Organization: Memorial Hospital for Cancer and Allied
Diseases
4. Contract Number: 55224
5. Starting Date: 6/30/75 6. Expiration Date: 6/20/78
7. Objective: To serve as a focal point within the center for information
about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/
education office and, by the end of the first year, install WATS lines
for hotline services for the public. Contractor will conduct the
program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service, operated for a year as a
non-promoted office of the center responding to public inquiries
routinely routed to them, began promoting the service in May 1977,
and currently handles approximately 200 inquiries a month from the
metropolitan New York City area. Additionally, the Office of Cancer
Communications, which operates this CIS program, also conducts special
cancer education programs in the five boroughs of NYC. Among these
is a special minority project in the Brooklyn area in which black women
at high risk to breast cancer are taught breast self-examination. Also,
an anti-smoking program for public school teenagers is underway in the
Bronx.
10. Significance for Cancer Control Program: Supports the practical goal
of Cancer Control by aiding in the translation of, transmission to and
full utilization by the public and health professionals of knowledge
concerning means of reducing incidence, morbidity and mortality of
cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$88,092

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. Alfred L. Frechette
44 Binney Street
Boston, Massachusetts 02115
3. Performing Organization: Sidney Farber Cancer Center
4. Contract Number: 55229
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Sidney Farber Comprehensive Cancer Center, under the auspices of the Massachusetts Regional Cancer Control Program, opened its toll-free telephone system on May 17, 1976, and currently handles approximately 520 public and professional inquiries about cancer a month. A trained volunteer force of about 20 persons, under professional supervision, responds to these public and professional inquiries. In addition, the program publishes and distributes a newspaper column "Cancer Information" which appears in four major daily newspapers in Massachusetts and Maine. Additionally, a "Cancer Facts" column appears in a widely circulated weekly television listing. The program is jointly sponsored with the Massachusetts American Cancer Society, Massachusetts Medical Society and the Massachusetts College of Surgeons. A phone line to serve Maine is scheduled for a September 12 opening.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$83,353

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. Harold P. Rusch
750 University Avenue
Madison, Wisconsin 53706
3. Performing Organization: University of Wisconsin
4. Contract Number: 55228
5. Starting Date: 6/1/75 6. Expiration Date: 6/31/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline serves for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service opened May 1, 1976, expanding upon a telephone response system already in existence there. Currently, the service handles over 500 telephone inquiries a month from the public and health professionals. A cadre of 15 trained volunteers responds to these inquiries under professional supervision. Additionally, a newsletter for health professionals is produced by the Office of Cancer Communications, which operates the CIS program. The office also played an instrumental role in obtaining legislation providing for the payment of health benefits to women needing breast prosthesis. The office has also conducted an extensive educational program concerning testicular cancer and has conducted breast self-examination classes through the school system.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$89,855

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Jack E. White, M.D.
Howard University
Cancer Research Center
College of Medicine
Washington, D. C. 20059
3. Performing Organization: Howard University
4. Contract Number: 55230
5. Starting Date: 6/27/75 6. Expiration Date: 6/26/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service opened on September 6, 1976, and currently handles approximately 180 telephone inquiries concerning cancer from the public and health professionals. Approximately 12 volunteers have been recruited and trained to respond to these inquiries. The Office of Cancer Communications, which manages the CIS program, also supports the public information activities of the D. C. Division of the American Cancer Society on a project by project basis. An intensive promotion campaign through non-traditional channels of communication has been launched to reach minority audiences.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$95,000

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Joseph R. Bertino, M.D.
Yale University
155 Whitney Avenue
New Haven, Connecticut 06520
3. Performing Organization: Yale University
4. Contract Number: 55232
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service opened in June 1976 and currently handles approximately 300 telephone inquiries a month from the public and health professionals. The Office of Cancer Communication at this center also provides communication support to the Cancer Center and to the Community-Based Cancer Program for Connecticut. In this capacity, the office produces a variety of cancer information materials and engages in extensive planning activities leading to the better coordination of cancer-related resources within the state.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$107,021

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: E. Harvey Estes, M.D.
Duke University Medical Center
Durham, North Carolina 27710
3. Performing Organization: Duke University
4. Contract Number: 55234
5. Starting Date: 6/4/75 6. Expiration Date: 6/3/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: Duke University opened a toll-free telephone system May 16, 1976, and currently averages 560 telephone inquiries a month about cancer. A trained volunteer force of approximately 25 persons respond to these public and professional inquiries under professional supervision. A comprehensive directory of cancer-related resources for the state of North Carolina has been compiled minimizing the need for call-backs. In addition to operating the toll-free telephone system, the Duke Communications Office has engaged in cancer education programs, many in cooperation with the North Carolina Division of the American Cancer Society. Among these programs was a Thyroid Cancer Recall Program in which a special effort was made to locate persons at risk to cancer because of irradiation during youth and direct them to physicians for a checkup.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$134,000

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Samuel G. Taylor, III, M.D.
Illinois Cancer Council
37 South Wabash Avenue
Chicago, Illinois 60603
3. Performing Organization: Illinois Cancer Council
4. Contract Number: 55245
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service opened in May 1976, primarily as a support mechanism for the 26 American Cancer Society area offices in Illinois. The public was encouraged to call the area office with their questions where professional ACS staff responded. If ACS staff cannot answer the question, the caller is referred to the Cancer Information Service. The toll-free number, as well as the appropriate telephone number of the ACS area office, is heavily promoted throughout Illinois. Over the past year, experience has revealed that the public, as often as not, contacts the Cancer Information Service directly. Presently, the CIS is handling about 400 calls a month. A significant number of these calls are from health professionals and a special effort is made by this CIS office to service health professionals.
10. Significance for Cancer Control Program: Supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$125,000

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. John R. Durant
Board of Trustees of the University
of Alabama in Birmingham
University Station
Birmingham, Alabama 35294
3. Performing Organization: University of Alabama
4. Contract Number: 55231
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hot-line services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: Because of prevailing medical opinion in the state, a toll-free telephone system responding to public inquiries about cancer was not felt to be an effective means of reaching the public with cancer information. Assistance has been provided to Project HELP, which attempts to reach the rural poor through interpersonal and printed communication. In addition, a newspaper column is produced which is distributed widely throughout Alabama. The Office of Cancer Communication also responds to written communication from the public.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. William B. Hutchinson
Fred Hutchinson Cancer Research Center
1102 Columbia Street
Seattle, Washington 98104
3. Performing Organization: Fred Hutchinson Cancer Research Center
4. Contract Number: 55233
5. Starting Date: 6/20/75 6. Expiration Date: 6/19/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information System at this center was designed and developed as a support service for the Washington State Division of the American Cancer Society. The public is encouraged to call their local unit of the ACS with their questions concerning cancer. Should volunteer operators at the separate unit offices be unable to answer a public inquiry, the caller will be referred to the CIS operators at the center, or the ACS operators will call on behalf of the inquirer. This system became operational in June 1977.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1.
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: G. Denman Hammond, M.D.
University of Southern California
School of Medicine
2025 Zonal Avenue
Los Angeles, California 90033
3. Performing Organization: University of Southern California
4. Contract Number: 55235
5. Starting Date: 6/15/75
6. Expiration Date: 6/14/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS line for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information System opened September 1, 1976, and currently handles approximately 800 telephone inquiries a month concerning cancer from the public and health professionals. The Office of Cancer Communications, which operates the CIS program, is involved in several cancer education projects, among them a special effort to reach Korean and Spanish surname groups in the Los Angeles area. The Communications Office also cosponsored, with the American Cancer Society, a testicular cancer education program.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Roger Shaffer
Colorado Regional Cancer Center, Inc.
165 Cook Street
Denver, Colorado 80206
3. Performing Organization: Colorado Regional Cancer Center, Inc.
4. Contract Number: 55236
5. Starting Date: 6/15/75 6. Expiration Date: 6/14/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service, a toll-free telephone system, opened April 28, 1976, and currently handles approximately 200 telephone inquiries a month from the public and health professionals, primarily from the Denver Metropolitan area. The Office of Cancer Communications, which manages the CIS program, also provides communication support for a variety of cancer-related agencies and organizations in Colorado, including the Colorado Division of the American Cancer Society and CanSurmounters, etc. The office has planned and conducted conferences on cancer education.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Mr. Malcolm Donaldson
The Institute for Cancer Research
7701 Burholme Avenue
Philadelphia, Pennsylvania 19111
3. Performing Organization: Fox Chase Cancer Institute
4. Contract Number: 55237
5. Starting Date: 6/30/75 6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: A toll-free telephone service for Pennsylvania, Delaware and New Jersey was implemented in stages during April and May of 1976, and the service currently handles approximately 400 inquiries a month from the public. A professional inquiry service has also been initiated, and the office has entered a heavy promotional period in an effort to establish the service among health professionals. In addition, the Office of Cancer Communication engages in a wide variety of special cancer education activities, including conducting seminars for clergymen and the press.
10. Significance for Cancer Control Program: Supports the practical goal of Cancer Control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches; C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Dr. Albert H. Owens, Jr.
The Johns Hopkins University
School of Medicine
Charles and 34th Streets
Baltimore, Maryland 21218
3. Performing Organization: The Johns Hopkins University
4. Contract Number: 55241
5. Starting Date: 6/28/75 6. Expiration Date: 6/27/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information System opened in October 1976, and currently handles approximately 200 public and professional telephone inquiries a month. The Office of Cancer Communication, which operates the CIS, also provides communication support for the cancer center, producing literature and arranging public and professional seminars on cancer education.
10. Significance for Cancer Control Program: Supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: Bruce Douglass, M.D.
Mayo Foundation
200 First Street, S.W.
Rochester, Minnesota 55901
3. Performing Organization: Mayo Foundation
4. Contract Number: 55242
5. Starting Date: 6/15/75 6. Expiration Date: 6/14/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: Under the auspices of the Minnesota Cancer Council, a state-wide organization of cancer concerned organizations, the Cancer Information Service opened March 29, 1976, and currently handles approximately 420 inquiries about cancer a month from the public and health professionals. This program is heavily promoted to the public and, through appropriate channels, to health professionals and consequently a higher proportion of health professionals make use of this system than they do those in other states. The office also sponsors a series of traveling exhibits on oral cancer and breast cancer and conducts local programs for non-cancer-related organizations throughout the state. The University of Minnesota and the Minnesota Division of the American Cancer Society are highly supportive of the program and provide volunteers to staff CIS.
10. Significance for Cancer Control Program: Supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: C. Gordon Zubrod, M.D.
University of Miami School
of Medicine
P. O. Box 520875
Miami, Florida 33152
3. Performing Organization: University of Miami
4. Contract Number: 55243
5. Starting Date: 6/27/75 6. Expiration Date: 6/26/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The toll-free telephone system opened February 2, 1976, and currently handles over 600 telephone inquiries about cancer from the public and health professionals each month. The Office of Cancer Communication conducts special cancer education programs for health professionals on such matters as how to better relate to cancer patients. In cooperation with the American Cancer Society, the Communications Office has held a regional conference on employment practices affecting cancer patients.
10. Significance for Cancer Control Program: Supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: Comprehensive Cancer Center Communication Network
2. Principal Investigator: R. Lee Clark
University of Texas
M. D. Anderson Hospital and
Tumor Institute
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: M. D. Anderson Hospital and Tumor Institute
4. Contract Number: 55244
5. Starting Date: 6/30/75
6. Expiration Date: 6/29/78
7. Objective: To serve as a focal point within the center for information about cancer for the public and health professionals.
8. Proposed Course: The contractor will establish an information/education office and, by the end of the first year, install WATS lines for hotline services for the public. Contractor will conduct the program, including promotion for a total of 3 years.
9. Progress: The Cancer Information Service toll-free telephone system opened in June, 1976, with a two county test in the Houston area and by September had expanded to the entire state. The CIS currently handles approximately 375 telephone inquiries a month from the public concerning cancer. The Cancer Information Service, a part of the Center's Office of Cancer Communications, also develops innovative means of communicating cancer information to hard to reach audiences at high risk, especially minority groups without easy access to the health care system. Among these projects is a series of specially-created one-minute cancer education films for showing on closed circuit television systems linking waiting rooms in nine of the city's hospitals serving those audiences.
10. Significance for Cancer Control Program: Supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning means of reducing incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C1, C2, C3, C5, C6
Approaches: C1.1, C1.2, C2.1, C3.1,
C5.1, C5.3, C6.1
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: None

CONTRACT SUMMARY

1. Title: National Cancer Consultative Programs for Hospitals
2. Principal Investigator: Dr. Andrew Mayer
American College of Surgeons
Chicago, Illinois 60611
3. Performing Organization: American College of Surgeons
4. Contract Number: 65282
5. Starting Date: 11/12/75
6. Expiration Date: 2/28/79
7. Objectives: (a) To review hospital cancer programs and to certify them based upon established criteria developed by the members American College of Surgeons; (b) conduct continuing education cancer programs nationally and locally for physicians; and (c) conduct tumor registry training courses for local hospital personnel.
8. Proposed Course: At the request of local hospitals, a surveyor for the American College of Surgeons evaluates the hospital cancer program based upon criteria determined by the Committee of Approvals and Executive Committee. If the standards of the hospital are met, the cancer program of the hospital is certified. National postgraduate courses and symposia on oncology topics are held each year. Workshops oriented for cancer registry programs are held yearly. Lectures at schools for medical record technicians are held locally.
9. Progress: During the past year, physician surveyors and cancer program consultants completed 240 formal on-site surveys and 209 on-site consultative visits. A postgraduate course on Alimentary Tract Cancer and a symposium of cancer of the breast were held in conjunction with the Annual Congress of the American College of Surgeons in October, 1976. Twenty-five two day workshops were held this past year for physicians and faculty members on cancer registries. In addition, thirteen lectures were given at schools for medical record administrators and medical record technicians.
10. Significance to Cancer Control: To evaluate methods, techniques and principles of cancer control interventions.
11. Project Officer: Dr. E. W. Bird
12. FY 1977 Funds: \$280,484

CONTRACT SUMMARY

1. Title: Dial Access Telephone Cancer Information Service
2. Principal Investigator: Robert C. Hickey, M.D.
6723 Bertner Avenue
Houston, Texas 77025
3. Performing Organization: M. D. Anderson Hospital
4. Contract Number: 35033
5. Starting Date: 6/28/73
6. Expiration Date: 6/27/77
7. Objective: To operate and evaluate the effectiveness of an expanded dial access telephone analysis system at M. D. Anderson Hospital in improving patient care. Assessments will be made of its instructional value and expansion to an enlarged audience of health professionals.
8. Proposed Course: The contractor will establish and maintain a library of taped messages concerning the diagnosis, treatment and continuing care of cancer and make these messages available to health professionals through a toll-free telephone system.
9. Progress: The Dial Access project completed three years of contract operation in June 1976 and a first year renewal in June 1977. The program consists of approximately 300 tapes ranging from six to eight minutes of running time intended primarily for the continuing education of physicians and dentists. Additional components for pharmacists and nurses and other health professionals are being added. The system utilized five WATS telephone lines which are connected to playback tape cartridge players. When a physician or other health professional wants to hear a tape on a particular cancer topic, e.g., Chemotherapy of Breast Cancer, the WATS number is dialed and the operator connects the caller to the tape requested. There is no charge for the call.

The service is available to health professionals in the contiguous 48 states, but is promoted only in the 17 states comprising the Southern Medical Association Region. The Dial Access System has received 26,000 calls in a recent 18-month period, mostly from physicians. Increasingly, pharmacists are utilizing the service. A questionnaire was sent to approximately 3,400 first-time users in 1974. Seventy-three percent completed the questionnaire. Respondents, when asked if the tape met their specific needs, and measured on a scale of 10, gave the program a mean rating of 7.5.

The request for the renewal of the contract includes plans for an expansion of the program to make it national in scope. The success of the program in the southern service area was deemed to merit its expansion not only geographically but for service to additional health service groups.

10. National Cancer Program Objectives: C3, C5, C6
Approaches: C3.1, C3.2, C5.1, C5.2, C6.1
11. Project Officer: Mr. Warren Dunn
12. FY 1977 Funds: \$105,000

CONTRACT SUMMARY

1. Title: Expansion and Evaluation of Telephone Cancer Public Information System - CAN-DIAL
2. Principal Investigator: Dr. Edwin Mirand
Roswell Park Memorial Institute
666 Elm Street
Buffalo, New York 14203
3. Performing Organization: Roswell Park Memorial Institute
4. Contract Number: 45073
5. Starting Date: 4/1/74
6. Expiration Date: 7/30/77
7. Objective: To expand the CAN-DIAL System of Cancer Information for the public to cover a 24-hour period and to extend it over weekends.
8. Proposed Course: To expand the house of operation, enlarge the capability of providing information in the language of the people and perform an extensive evaluation of various means of attracting public attention and evaluating the efficacy of the messages.
9. Progress: The CAN-DIAL Telephone Public Information System consists of a bank of pre-recorded taped messages on a variety of cancer topics which are likely to be of interest to individual members of the public. At present, there are approximately 36 tapes. As examples, the following titles are available for listening by dialing the CAN-DIAL number: Cancer's Warning Signals, Cancer of the Breast and How to Detect It, Cigarette Smoking and Pregnant Women. The System is housed at Roswell Park Memorial Institute, Buffalo, New York.

The objective is to expand this telephone tape system to provide cancer information to individual members of the public on request on a 24-hour a day basis and to extend it over weekends. This will require the preparation of additional tapes and the purchase of additional equipment. An advisory committee will advise and make evaluations.

A liaison and information exchange program between sponsoring agencies and community groups is being initiated. The emphasis is to be placed upon providing cancer information in language lay persons can understand. Greater efforts will be made to make the public aware of the availability of this service.

The program has been expanded to the new hours and tape inventory is being increased. Tapes are also being updated.

Management of the program has been transferred to the Cancer Information Service, Office of Cancer Communication.

10. Significance for Cancer Control Program: The program supports the practical goal of cancer control by aiding in the translation of, transmission to and full utilization by the public and health professionals of knowledge concerning the means of reducing the incidence, morbidity and mortality of cancer in humans.

National Cancer Program Objectives: C3, C5,
Approaches: C3.5.1, C5.5.1

11. Project Officer: Mr. Warren Dunn

12. FY 1977 Funds: None
TQ: \$113,988

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